4.5 VEGETATION

4.5.1 Significance Criteria

An adverse impact on vegetation would be considered significant and would require mitigation if Project construction or operation would:

- disturb a substantial portion of the vegetation type within a local region to the point where natural or enhanced regeneration could not restore the vegetation to its preconstruction condition within 3 years;
- result in the long-term (more than 5 years) reduction or alteration of unique, rare, or special concern vegetation types; riparian vegetation; or natural communities;
- introduce new, or lead to the expanded range of existing, invasive noxious weed species or soil pests, so that they interfere with crop production or successful revegetation of natural communities; or
- cause a spill or leak that would contaminate the soil to the extent of eradicating the existing vegetation, inhibiting revegetation, or migrating to other areas and affecting soil and water ecology via erosion and sedimentation.

4.5.2 Existing Vegetation Resources

The proposed pipeline route is entirely within the Lower Colorado River Valley subdivision of the Sonoran Desert, and vegetation communities found in the Project vicinity are typical of that subdivision. The characterization of vegetation communities presented in this EIS/EIR is based on the published and unpublished literature (Holland 1986, Sawyer and Keeler-Wolf 1995) as well as information from field surveys.

Distinct vegetation communities have been identified that occur within the Project area as discussed below. Table 4.5.2-1 lists these communities; provides general descriptions, including common vegetative species typical of each community; and identifies the facility and milepost ranges where each community occurs. Wetland vegetation communities that would be affected by the Project are discussed in Section 4.4. Areas of riparian vegetation would be avoided by the Project.

Pipeline Facilities

The B-Line would cross three native desert vegetation communities as well as agricultural and urban/ruderal lands that have been significantly altered by human settlement.

The primary vegetation community that would be crossed by the B-Line is creosote scrub. This community comprises about 78 percent of the vegetation communities crossed by the B-Line. The next two most prevalent vegetation communities crossed are urban/ruderal and desert wash woodland, comprising about 12 and 10 percent, respectively, of the vegetation communities crossed by the B-Line. The remaining upland vegetation community that would be crossed by the B-Line is the agricultural community, which would account for less than 1 percent of the vegetation crossed.

TABLE 4.5.2-1

Vegetation Communities Affected by the North Baja Pipeline Expansion Project

Vegetation Community	General Description	Common Species	Location of Occurrence (Facility/Milepost Range)
Creosote bush scrub	Generally less than 10 feet tall and widely spaced, usually with bare ground between plants. Perennial vegetation is less than 25 percent of the landscape. Also included are non-wetland tamarisk scrub, rocky slopes, stabilized sand dunes, and desert saltbush scrub communities.	White bursage, brittlebush, ocotillo, saltbushes, desert-holly, mesquites, tamarisk	B-Line, MPs 11.7-28.2, 28.6-29.7, 31.7-79.8 IID Lateral, MPs 0.0-3.5, 7.7-27.5
Desert wash woodland	Open to dense, drought deciduous, microphyllous riparian thorn scrub woodlands, less than 60 feet tall.	Cat-claw acacia, desert broom, fairy duster, burrobrush, Anderson's thornbush, tamarisk	B-Line, MPs 11.7-28.2, 28.6-29.7, 31.7-79.8
Desert sand dune	Sparsely vegetated, actively moving, sand dunes.	Creosote bush, mesquite, dune buckwheat, dune sunflower, Peirson's milk-vetch	IID Lateral, MPs 0.0-7.7
Agricultural	Consists of commercial agricultural crops dependent on irrigation.	Cotton, alfalfa, wheat, melons	B-Line, MPs 0.4-2.9, 10.5-11.7 Arrowhead Extension, MPs 1.0-2.1 IID Lateral, MPs 27.6-42.8, 44.1-45.6
Urban/ruderal	Sparsely vegetated, previously disturbed areas. May include improved landscaped areas.	Wild oats, mustard, thistle, landscape species	B-Line, MPs 0.0-0.2, 2.9-10.5 Arrowhead Extension, MPs 0.0-1.0 IID Lateral, MPs 42.8-44.1, 45.6-45.7

Along the Arrowhead Extension, 52 percent of the vegetation communities that would be crossed are agricultural and 48 percent are urban/ruderal.

The primary vegetation community that would be crossed by the IID Lateral is urban/ruderal, which accounts for about 74 percent of the vegetation communities crossed. The next most prevalent vegetation community that would be crossed is creosote bush scrub, which accounts for 16 percent of the vegetation communities crossed. The desert sand dune and agricultural communities account for 9 percent and less than 1 percent, respectively, of the vegetation communities crossed by the IID Lateral.

Aboveground Facilities

The modifications proposed at the Ehrenberg Compressor Station would take place primarily within the fenceline; however, the installation of about 400 feet of header piping outside the fenced site would affect the urban/ruderal community. The Blythe-Arrowhead Meter Station and pig receiver would be within the existing SoCalGas Blythe Compressor Station site and would not affect additional vegetation resources. Modifications at the Ogilby Meter Station (including the pig launcher and receiver) would affect the creosote bush scrub community. Construction of the El Centro Meter Station would affect the urban/ruderal community.

Nine valves would be constructed along the B-Line, all of which would be collocated with existing aboveground facilities. Four of the B-Line valves (#s 2, 5, 6, and 7) would be collocated with existing valves along the A-Line; however, the permanently maintained area at the existing valve sites

would need to be expanded in order to accommodate these new valves. Expansion of these existing sites would affect the following vegetation communities: urban/ruderal (valve #2) and creosote bush scrub (valve #s 5, 6, and 7). Construction of the remaining five valves (#s 1, 3, 4, 8, and 9) would take place within currently maintained aboveground facility sites and would not affect additional vegetation resources.

Four valves would be constructed in association with the IID Lateral. Valve #1 would be within the Ogilby Meter Station site and would not require any additional land. Valve #2 would affect the desert sand dune community, valve #3 would affect the creosote bush scrub community, and valve #4 would affect the agricultural community.

The pig launcher, taps, and related crossover piping associated with the Arrowhead Extension would affect the agricultural community. The creosote bush scrub community would be affected by construction of the pig launcher and receiver at the Rannells Trap, as well as the construction of the tap at the B-Line and the pig launcher associated with the IID Lateral.

Pipe Storage and Contractor Yards

North Baja identified four pipe storage and contractor yards to be used during construction, three of which were used during construction of the A-Line. All four of these sites are previously disturbed sites used for industrial/commercial purposes and occur primarily within the urban/ruderal community although the creosote bush scrub community would also be affected.

Access Roads

Improvements or modifications to 44 existing access roads and construction of 1 new permanent access road (less than 0.1 mile long) associated with the B-Line would affect the creosote bush scrub, agricultural, and desert wash woodland communities. The construction of one permanent access road (less than 0.1 mile long) associated with the Arrowhead Extension would affect the urban/ruderal community. Construction of the IID Lateral would require improvements or modifications to six existing access roads and the construction of one new permanent access road (less than 0.1 mile long) that would affect the creosote bush scrub, urban/ruderal, agricultural, and desert sand dune communities.

4.5.3 General Impact and Mitigation

Pipeline Facilities

The primary impact of the pipeline facilities on vegetation would be the cutting, clearing, and/or removal of existing vegetation within the construction work area. The degree of impact would depend on the type and amount of vegetation affected, the rate at which the vegetation would regenerate after construction, and the frequency of vegetation maintenance conducted during operation. Existing vegetation would be disturbed everywhere along the construction right-of-way. In general, the swath of vegetation that would be disturbed during construction would be 105 feet wide for the length of the B-Line, between 60 and 100 feet wide for the Arrowhead Extension, and between 60 and 80 feet wide for the IID Lateral. Because North Baja would work over its existing pipeline to construct the B-Line, it would minimize the area of new disturbance and, therefore, would minimize impacts on vegetation. About 75 percent of the vegetation disturbance associated with the B-Line would be within North Baja's existing, previously disturbed right-of-way.

Secondary effects associated with disturbances to vegetation could include increased soil erosion (see Section 4.2), increased potential for the introduction and establishment of invasive weedy species

(see Section 4.5.5), and a local reduction in available wildlife habitat (see Section 4.6.1). Other potential effects on vegetation could include the contamination of soils from spills or leaks of fuels, lubricants, and coolants from construction equipment that would restrict the ability of vegetation to become re-established.

North Baja's proposed construction right-of-way and temporary extra workspaces would disturb a total of about 1,533.6 acres of vegetation. Table 4.5.3-1 lists the amount of each vegetation community that would be affected by construction and operation of the pipeline facilities.

The most common vegetation communities that would be affected are creosote bush scrub (942.1 acres) and urban/ruderal (374.0 acres), which account for about 86 percent of the vegetation that would be cleared or affected by construction. The next most common communities that would be disturbed are agriculture (93.5 acres) and desert wash woodland (82.9 acres) accounting for about 12 percent of the affected vegetation. The least common vegetation community that would be affected is desert sand dunes (41.1 acres), which accounts for less than 3 percent of the vegetation that would be disturbed by the construction of the pipeline facilities.

After cleanup and reseeding of the right-of-way, the agricultural community would typically regenerate quickly and impacts on these vegetation communities would be short term. Cultivated areas are regularly disturbed, generally receive ample water through irrigation if necessary, and would quickly re-establish on the right-of-way following replanting by the landowners.

The removal of desert vegetation would have a long-term impact. The arid environment characteristic of these habitats is not conducive to plant growth and would slow the regeneration of vegetation following construction. Moreover, because of the dryness of these areas, regeneration by active seeding or planting is typically ineffective. Natural regeneration of these areas would take several years and in some cases could take over 50 years.

Of the vegetation communities that would be disturbed, the most sensitive is the desert wash woodland, which would be crossed by the B-Line. Desert wash species growing in microphyll woodland, such as ironwood, blue palo verde, and smoke tree, provide structural diversity, cover, and forage for many more wildlife species than the creosote bush scrub habitat. Although this vegetation type provides important habitat, it has not been officially designated as a vegetation community of special concern or value.

Of the total 82.9 acres of desert wash woodland that would be cleared, 22.0 acres (about 26 percent) would be new disturbance (i.e., not disturbed during construction of the A-Line). Because of the importance of microphyll woodland, North Baja proposes to minimize tree clearing in woodland areas by reducing the width of the construction right-of-way in certain locations. Based on field surveys, North Baja adopted a selection criteria that identified areas of vegetation with at least 20 percent crown cover within the non-construction or "passing lane" portion of the construction right-of-way where it proposes to minimize tree clearing by reducing the width of the right-of-way from 105 feet to 80 feet. The BLM and the CDFG approved this approach to identify tree groupings to be preserved during construction of North Baja's A-Line. For the B-Line, North Baja identified 16 woodland areas of native trees (about 24.1 acres) along the proposed route where the right-of-way width would be reduced. The reduction of the right-of-way width from 105 feet to 80 feet at these 16 areas would preserve 5.6 acres of desert wash woodland trees, which would reduce the amount new clearing in desert wash woodlands by about 20 percent. Table 4.5.3-2 identifies the location and extent of these areas.

TABLE 4.5.3-1

Acres of Vegetation Communities Affected by the North Baja Pipeline Expansion Project

Facility	Creosote Bush Scrub			Urban/Ruderal			Agriculture			Desert Wash Woodland [a]			Desert Sand Dunes			Total		
	Const.	Oper.	New	Const.	Oper.	New	Const.	Oper.	New	Const.	Oper.	New	Const.	Oper.	New	Const.	Oper.	New
B-Line																		
Pipeline Facilities																		
Pipeline Right-of-Way	761.2	0.0	198.0	117.7	0.0	0.5	28.0	0.0	8.5	75.6	0.0	19.6	0.0	0.0	0.0	982.5	0.0	226.6
Temporary Extra Workspace	83.6	0.0	36.1	0.0	0.0	0.0	34.7	0.0	11.4	7.3	0.0	2.4	0.0	0.0	0.0	125.6	0.0	49.9
Pipeline Facilities Subtotal	*844.8*	*0.0*	*234.1*	*117.7*	*0.0*	*0.5*	*62.7*	*0.0*	*19.9*	*82.9*	*0.0*	*22.0*	*0.0*	*0.0*	*0.0*	*1,108.1*	*0.0*	*276.5*
Aboveground Facilities	1.5	0.5	1.5	0.8	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	0.5	2.3
Pipe Storage and Contractor Yards	5.0	0.0	0.0	45.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.4	0.0	0.0
Access Roads	97.1	0.0	0.0	0.0	0.0	0.0	2.3	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	99.7	0.0	0.0
B-Line Subtotal	*948.4*	*0.5*	*235.6*	*163.9*	*0.0*	*1.3*	*65.0*	*0.0*	*19.9*	*83.2*	*0.0*	*22.0*	*0.0*	*0.0*	*0.0*	1,260.5	0.5	278.8
Arrowhead Extension																		
Pipeline Facilities																		
Pipeline Right-of-Way	0.0	0.0	0.0	7.2	0.0	7.2	13.4	4.7	13.4	0.0	0.0	0.0	0.0	0.0	0.0	20.6	4.7	20.6
Temporary Extra Workspace	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.0	1.7	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.0	1.7
Pipeline Facilities Subtotal	*0.0*	*0.0*	*0.0*	*7.2*	*0.0*	*7.2*	*15.1*	*4.7*	*15.1*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*22.3*	*4.7*	*22.3*
Aboveground Facilities	0.0	0.0	0.0	1.0	0.3	1.0	1.0	0.8	1.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	1.1	2.0
Pipe Storage and Contractor Yards	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Access Roads	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Arrowhead Extension Subtotal	*0.0*	*0.0*	*0.0*	*8.2*	*0.3*	*8.2*	*16.1*	*5.5*	*16.1*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*24.3*	*5.8*	*24.3*

TABLE 4.5.3-1 (cont'd)

Acres of Vegetation Communities Affected by the North Baja Pipeline Expansion Project

	Creosote Bush Scrub			Urban/Ruderal			Agriculture			Desert Wash Woodland[a]			Desert Sand Dunes			Total		
Facility	Const.	Oper.	New	Const.	Oper.	New	Const.	Oper.	New	Const.	Oper.	New	Const.	Oper.	New	Const.	Oper.	New
IID Lateral																		
Pipeline Facilities																		
Pipeline Right-of-Way	72.8	42.5	72.8	245.7	59.7	245.7	1.0	0.0	1.0	0.0	0.0	0.0	40.7	0.0	40.7	360.2	102.2	360.2
Temporary Extra Workspace	24.5	0.0	24.5	3.4	0.0	3.4	14.7	0.0	14.7	0.0	0.0	0.0	0.4	0.0	0.4	43.0	0.0	43.0
Pipeline Facilities Subtotal	*97.3*	*42.5*	*97.3*	*249.1*	*59.7*	*249.1*	*15.7*	*0.0*	*15.7*	*0.0*	*0.0*	*0.0*	*41.1*	*0.0*	*41.1*	*403.2*	*102.2*	*403.2*
Aboveground Facilities	0.4	0.2	0.4	2.5	0.2	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	0.4	2.9
Pipe Storage and Contractor Yards	0.0	0.0	0.0	22.7	0.0	22.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	22.7	0.0	22.7
Access Roads	2.9	0.1	0.2	1.3	0.0	0.0	6.1	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	11.2	0.1	0.2
IID Lateral Subtotal	*100.6*	*42.8*	*97.9*	*275.6*	*59.9*	*274.3*	*21.8*	*0.0*	*15.7*	*0.0*	*0.0*	*0.0*	*42.0*	*0.0*	*41.1*	*440.0*	*102.7*	*429.0*
Project Total																		
Pipeline Facilities																		
Pipeline Right-of-Way	834.0	42.5	270.8	370.6	59.7	253.4	42.4	4.7	22.9	75.6	0.0	19.6	40.7	0.0	40.7	1,363.3	106.9	607.4
Temporary Extra Workspace	108.1	0.0	60.6	3.4	0.0	3.4	51.1	0.0	27.8	7.3	0.0	2.4	0.4	0.0	0.4	170.3	0.0	94.6
Pipeline Facilities Subtotal	942.1	42.5	331.4	374.0	59.7	256.8	93.5	4.7	50.7	*82.9*	*0.0*	*22.0*	*41.1*	*0.0*	*41.1*	*1,533.6*	*106.9*	*702.0*
Aboveground Facilities	1.9	0.7	1.9	4.3	0.5	4.3	1.0	0.8	1.0	0.0	0.0	0.0	0.0	0.0	0.0	7.2	2.0	7.2
Pipe Storage and Contractor Yards	5.0	0.0	0.0	68.1	0.0	22.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	73.1	0.0	22.7
Access Roads	100.0	0.1	0.2	1.3	0.0	0.0	8.4	0.0	0.0	0.3	0.0	0.0	0.9	0.0	0.0	110.9	0.1	0.2
Project Total	1,049.0	43.3	333.5	447.7	60.2	283.8	102.9	5.5	51.7	83.2	0.0	22.0	42.0	0.0	41.1	1,724.8	109.0	732.1
Percent of Total	60.8	39.6	45.5	26.0	55.1	38.7	6.0	5.0	7.1	4.8	0.0	3.0	2.4	0.0	5.6	100.0	100.0	100.0

[a] Acres include areas with at least 20 percent tree cover where the right-of-way width was reduced (see Table 4.5.3-2).

Const. = Construction.

Oper. = Operation.

New = New disturbance (i.e., not disturbed during construction of the A-Line).

TABLE 4.5.3-2

Locations Along the B-Line Where the Construction Right-of-Way Would be Reduced to 80 Feet to Minimize Tree Clearing

Starting Milepost	Length (feet)	Crown Cover (percent)	Previous Disturbance (A-Line) (acres)	New Disturbance (acres)
16.9	345	25	0.4	0.2
17.9	270	31	0.3	0.2
20.0	700	30	0.8	0.5
22.3	480	20	0.6	0.3
22.5	250	43	0.3	0.2
22.6	1,000	33	1.1	0.7
22.8	180	42	0.2	0.1
23.3	340	50	0.4	0.2
23.4	250	63	0.3	0.2
23.5	590	41	0.7	0.4
25.8	850	35	1.0	0.6
34.5	860	25	1.0	0.6
45.1	500	48	0.6	0.3
51.1	1,800	30	2.1	1.2
51.7	1,100	30	1.3	0.8
64.5	500	31	0.6	0.3
Total	10,015		11.7	6.8

As proposed in the CM&R Plan, trees that cannot be avoided would be subjected to one of several treatments (prune, limb, or remove) based on proximity to the pipeline centerline. By pruning or limbing trees rather than removing them, many trees within the right-of-way would be preserved.

During the scoping process, the FWS identified impacts on desert wash woodland as a significant concern and requested that mitigation/restoration efforts be concentrated in the desert wash woodlands that would be crossed by the B-Line north and adjacent to the Cibola NWR and the Milpitas Wash. Additionally, the FWS suggested that North Baja consider conducting vegetation maintenance (i.e., noxious weed control) beyond the limits of the construction right-of-way in areas of microphyll woodland as part of off-site mitigation. As noted in North Baja's CM&R Plan, tree and shrub seedling recruitment was generally higher in areas of desert wash woodlands than in areas of creosote bush scrub. Moreover, seedling recruitment within the disturbed right-of-way was generally higher than in control plots located off of the right-of-way. Noxious weeds (e.g., African mustard and tamarisk), while present, were found in areas where weeds were present before construction. North Baja proposes to conduct the same restoration and maintenance activities for desert wash woodland that were conducted for the A-Line, which, as evidenced by the results of North Baja's mitigation and monitoring reports, were successful.

As was required by the CDFG to construct the A-Line, North Baja proposes compensatory mitigation for the loss of desert wash woodland vegetation. North Baja proposes an assessed financial contribution at a 2:1 ratio for the clearing of the 22.0 acres (new disturbance) of desert wash woodland in addition to the 1:1 compensation ratio it proposes to offset impacts on desert tortoise habitat. North Baja would negotiate off-site mitigation requirements with the FWS and the CDFG (see Section 4.7).

The BLM identified the Milpitas Wash SMA as a significant concern, noting that it consists of relatively unfragmented native vegetation communities. Further detail regarding the potential effects of the Project on managed wildlife habitats, including the Milpitas Wash SMA, is included in Section 4.6.2.4.

No impact on the riparian corridor adjacent to the Colorado River is anticipated because the crossing would be completed using the HDD method. The HDD would pass 60 feet below the bed of the Colorado River. Because the root zones of the vegetation adjacent to the Colorado River are primarily less than 15 feet deep, the adjacent riparian vegetation would not be affected by the HDD and removal of riparian vegetation along the Colorado River would not occur during construction or maintenance of the pipeline. Therefore, the habitat diversity added to the region by the Colorado River and its adjacent vegetation would not be compromised by the proposed Project. Similarly, implementation of the HDDs at the All-American Canal would avoid impacts on the riparian vegetation at these crossing locations.

Open-cut trenching through Rannells Drain (MP 11.4) would have a short-term impact on both wetland (cattails and bulrush) and upland (arrow weed, quailbush, and tamarisk) vegetation growing in and on the steep banks of the drain. This vegetation is routinely removed during drain maintenance by the PVID. The banks of the drain would be restored and stabilized following construction (see Section 4.2.4). Because vegetation has re-established following the construction of the A-Line in 2002, it is expected that the vegetation in Rannells Drain would regenerate on its own from existing seed and vegetative propagules within 2 years after construction.

Construction of the B-Line (primarily along 18th Avenue) and the IID Lateral (primarily along Hunt Road and East Ross Road) could affect mature landscaping associated with residential development. In many cases this mature vegetation provides shade and helps attenuate the effects of ambient dust. A total of 11 residences along the B-Line were identified where construction would affect landscaping. Impacts on landscaping along the Arrowhead Extension and the IID Lateral would largely be avoided. Based on North Baja's evaluation, no trees on residential properties are proposed for removal. Mitigation measures such as tree protection fencing would be employed to protect existing trees during construction. North Baja would restore landscaping following construction as part of site-specific plans. If mature trees or shrubs need to be removed during construction, landowners would be compensated for the loss of irreplaceable vegetation as part of agreements between North Baja and the landowners. Additional information about impacts on and potential mitigation measures for residential areas, including landscaping, is presented in Section 4.8.3.

To reduce impacts on vegetation within the construction and permanent rights-of-way and improve revegetation potential, North Baja would implement its CM&R Plan (see Appendix E). Specifically, North Baja would implement the following measures that were found to be successful for the A-Line:

- Segregate topsoil in all agricultural areas and in native habitats where grading is required. This measure would preserve the superior chemical and biological qualities of the topsoil and, in nonagricultural habitats, would preserve the native seed bank contained in the soil.

- Crush or skim vegetation within the construction right-of-way in areas where grading is not required, which would result in less soil disturbance. The remaining root crowns would aid in soil stabilization, help retain organic matter in the soil, aid in moisture retention, and have the potential to resprout following construction.

- Preserve native vegetation removed during clearing operations. The cut vegetation would be windrowed along the right-of-way during construction and then respread over the disturbed areas as part of restoration activities. This measure would be considered "vertical mulch" and would aid in seedling recruitment by trapping seeds, providing shade, and improving water infiltration. Additionally, this cut vegetation would add to the organic matter in the topsoil layer as it decomposes.

- Replant desert wash woodland species at specified locations along the right-of-way providing a visual barrier to the right-of-way to deter OHV traffic on the right-of-way (see Section 4.8.5). Although this vegetation would not be expected to survive, it would provide many of the benefits of vertical mulch described above in addition to preventing vegetation damage by OHV use on the right-of-way.

- Recontour disturbed areas as needed. The contours would be reshaped after backfilling the trench and replacing the topsoil to restore preconstruction contours and natural drainage patterns. This treatment would reduce erosion and the loss of topsoil, which would improve revegetation potential.

- Imprint areas of soil disturbance using a "sheep's-foot" roller or other methods. Imprinting would provide micro-catchment areas for seed retention and would improve water infiltration.

- Maintain water flow in crop irrigation systems, unless shutoff is coordinated with affected parties.

- Test for and alleviate compacted soils in agricultural and residential areas.

- Implement procedures to prevent or minimize the spread of noxious weeds or other undesirable species by limiting disposal of plant materials to suitable areas and the cleaning of clearing and grading equipment before beginning work on the Project (see Section 4.5.5).

- Monitor the revegetation of the right-of-way the year following construction and again during the second growing season. In agricultural areas, crop monitoring would be conducted to determine if additional restoration is required. Additional revegetation efforts would be conducted until revegetation is deemed successful. In non-agricultural lands, revegetation monitoring would be conducted until 2012 and would be considered successful if upon visual survey, the density and cover are similar to adjacent undisturbed lands.

Although construction of the pipeline facilities would result in long-term impacts on about 1,066.1 acres of native desert vegetation (i.e., creosote bush scrub, desert wash woodland, and desert sand dunes), North Baja's plan to overlap its construction right-of-way onto its existing pipeline right-of-way would reduce new impacts on undisturbed desert vegetation by about 63 percent. North Baja's plan to reduce its construction right-of-way through areas of desert wash woodland would further reduce impact on desert vegetation types and the implementation of its CM&R Plan would improve the success of natural restoration. The North Baja Pipeline Expansion Project would not represent a significant impact on vegetation because the Sonoran Desert encompasses more than 5.4 million acres in southeast California alone (Ceres 2006), and the Project would affect less than 0.01 percent of the regional desert vegetation type. Therefore, impacts on vegetation would be considered less than significant.

During the scoping process, several landowners expressed concern about the removal of native desert vegetation. As discussed above, the revegetation of desert areas could take from 5 to 50 years. A review of North Baja's post-construction monitoring reports for the A-Line indicates that following construction in 2002, natural seedling recruitment along the construction right-of-way has occurred within creosote bush scrub and desert wash woodlands. Seedlings of both annual species and perennial shrubs and trees were found growing on the right-of-way during annual vegetation monitoring.

As discussed in Section 4.2.4, the BLM would need to assess potential impacts on rangeland health on BLM lands attributable to the Project. One of the attributes that would be assessed is the integrity of the biotic community (i.e., the capacity of the area to support characteristic functional and structural communities, to resist loss of this function and structure due to disturbance, and to recover following disturbance [Pellant et al. 2005]). The removal of desert vegetation and disturbance of soils could affect the ability of the Project area to support vegetation and wildlife communities. However, North Baja's CM&R Plan, which includes measures to control erosion and preserve topsoil and scarce organic matter, would minimize impacts on the revegetation potential of the Project area. Similar measures were implemented during construction and restoration of the A-Line, and the results of revegetation monitoring indicate that revegetation is occurring within the disturbed areas.

All of the vegetation communities affected by the Project would be susceptible to secondary impacts related to soil contamination by materials used during construction activities. While these impacts would typically be minor because of the low frequency and volumes of these occurrences, the introduction of contaminants to soils could adversely affect the potential for revegetation. North Baja's SPCC Plan specifies cleanup procedures to minimize the potential for soil contamination from spills or leaks of fuels, lubricants, and coolants (see Appendix F). Adherence to North Baja's SPCC Plan would reduce the potential for a spill or leak to contaminate the soil to the extent of eradicating existing vegetation, inhibiting revegetation, or migrating to other areas and affecting soil and water ecology via erosion and sedimentation to a less than significant level.

Aboveground Facilities

The modifications proposed at the Ehrenberg Compressor Station would not permanently affect additional vegetation resources, although about 0.7 acre of the urban/ruderal community would be temporarily affected by the installation of header piping. At the Ogilby Meter Station, 0.2 acre of the creosote bush scrub community would be permanently affected by construction of a pig launcher and receiver. Construction of the El Centro Meter Station would temporarily affect 2.5 acres and permanently affect 0.2 acre of the urban/ruderal community, all of which occurs within the existing fenceline of the IID El Centro Generating Station.

The four valves along the B-Line that would require an expansion of existing valve sites (valve #s 2, 5, 6, and 7) would permanently affect 0.3 acre of urban/ruderal and 0.8 acre of creosote bush scrub communities. The three valves to be constructed along the IID Lateral would each affect less than 0.1 acre of the desert sand dune (valve #2), creosote bush scrub (valve #3), and agricultural (valve #4) communities.

Construction and operation of the pig launcher and receiver proposed at Rannells Trap would affect 0.3 acre of the creosote bush scrub community. Construction of the pig launcher, taps, and crossover piping associated with the Arrowhead Extension would permanently affect about 0.8 acre of the agricultural community. Permanent impacts on about 0.2 acre of the creosote bush scrub community would result from the construction of the tap to the B-Line and the pig launcher associated with the IID Lateral.

Access Roads

The construction, modification, and improvement to access roads used during construction of the proposed Project would primarily have temporary impacts on vegetation resources. Access road disturbance associated with the B-Line would temporarily affect 97.1 acres of the creosote bush scrub community, 2.3 acres of the agricultural community, and 0.3 acre of desert wash woodland. For the Blythe-Arrowhead Meter Station, a new permanent access road would be constructed, affecting less than

0.1 acre of the urban/ruderal community. Access roads associated with the IID Lateral would temporarily affect 6.1 acres of agricultural, 2.9 acres of creosote bush scrub, 1.3 acres of urban/ruderal, and 0.9 acre of desert sand dunes communities. About 0.1 acre of the creosote bush scrub community would be permanently affected by construction of the permanent access road to the tap facility.

Pipe Storage and Contractor Yards

The temporary use of four pipe storage and contractor yards would temporarily affect 68.1 acres of the urban/ruderal community and 5.0 acres of the creosote bush scrub community. No permanent impacts on vegetation would result from the use of these sites.

4.5.4 Vegetation Communities of Special Concern or Value

No designated vegetation communities of special concern or value were identified along the proposed pipeline routes or at aboveground facility sites.

Because no vegetation communities of special concern or value would be affected and any riparian vegetation crossed would be largely avoided, the potential for the Project to result in the long-term (more than 5 years) reduction or alteration of unique, rare, or special concern vegetation types; riparian vegetation; or natural communities would be less than significant.

4.5.5 Noxious Weeds and Other Invasive Plants

Noxious weeds and other invasive plants are non-native, undesirable native, or introduced species that are able to exclude and outcompete desirable native species, and thereby decrease overall species diversity. Noxious weeds often invade and persist in areas after disturbance (e.g., after construction of a pipeline) and can hinder restoration. Other aggressive plant species, both native and introduced, may also outcompete desirable native and other beneficial species. Noxious weeds are addressed by Executive Order 13112 (February 1999), which directs Federal agencies to prevent the introduction of invasive species; provide for their control; and minimize the economic, ecological, and human health impacts that invasive species cause. The order further specifies that a Federal agency shall not authorize, fund, or carry out actions likely to cause or promote the introduction or spread of invasive species in the United States or elsewhere unless it has determined that the benefits of such actions outweigh the potential harm caused by invasive species and that all feasible and prudent measures to minimize risk of harm would be taken in conjunction with the actions.

The removal of existing vegetation and the disturbance of soils during construction could create conditions for the invasion and establishment of exotic-nuisance species. Construction equipment traveling from invasive weed-infested areas into weed-free areas could also facilitate the dispersal of invasive weed seed and propagules and result in the establishment of noxious weeds in weed-free areas. The spread of exotic or noxious weeds has been identified as one of the most harmful threats to the biodiversity of the Sonoran Desert area (Marshall et al. 2000). The potential severity of the noxious weed impacts depends upon the species, the prevalence in the area before construction, and the intensity of the construction-induced dispersal.

Botanical surveys for the A-Line were conducted using the California Invasive Plant Council's (CIPC) List A and Red Alert lists to identify invasive weed species. Four invasive species were identified in significant numbers; African mustard, Australian saltbush, fountain grass, and tamarisk. No Red Alert species were found. North Baja conducted post-construction weed and revegetation surveys for the A-Line, the most recent of which occurred in the Spring of 2005. The surveys indicate that although weeds (specifically mustard and tamarisk) have reoccurred in areas where they were present before construction

of the A-Line, they have not spread to new areas along the right-of-way. Additionally, the surveys indicate that fountain grass has been eliminated from the right-of-way. Because there has been no spreading of noxious weeds as a result of construction of the A-Line, North Baja has not conducted post-construction noxious weed control measures with the exception of manual removal of tamarisk during revegetation surveys.

North Baja has not yet provided information regarding noxious weed species that may occur along the IID Lateral route; however, in accordance with the CM&R Plan (see Appendix E), surveys for noxious weeds along the IID Lateral would be conducted before construction.

The use of construction equipment and the importation of Project materials from areas outside the local region could introduce weed or soil pests that could interfere with crop production or successful revegetation of natural communities. North Baja would reduce the potential to spread noxious weeds and soil pests by implementing the measures that were successful during construction of the A-Line. These measures include:

- In accordance with Executive Order 13112, the construction area within lands administered by the BLM would be surveyed by a qualified noxious weed authority that would identify all noxious weeds present and provide a list to the authorized officer. A determination would be made by the authorized officer of any noxious weeds that require flagging for treatment before construction. Treatment would be according to the instructions of the authorized officer. Only BLM-approved herbicides would be used on BLM lands, and North Baja would coordinate with the appropriate BLM office prior to use of herbicides. Any use of herbicides in California would be handled by properly licensed county agricultural agents.

- Before construction, populations of plants listed as invasive exotics by the CIPC in its most recent invasive plant List A (including lists A-1 and A-2) and Red Alert list, as well as any other species listed on the BLM National List of Invasive Weed Species of Concern would be identified on the ground and on maps through a preconstruction survey. This would establish a baseline from which to evaluate post-construction monitoring surveys.

- Disposal of soil and plant materials from non-native areas would not be allowed in native areas. Weed propagules or soil pests that could occur in excess spoils or plant materials from non-native areas would not be allowed to be transferred to or disposed of within areas comprising native vegetation communities.

- All construction equipment would be washed before beginning work on the Project, equipment working in Arizona would be cleaned before beginning work in California, and equipment used to clear tamarisk would be washed before working elsewhere on the Project to prevent the spread of invasive weeds from other areas. Equipment would be washed at existing commercial wash stations.

- Construction personnel would be educated on weed identification and the importance of controlling and preventing the spread of invasive non-native species.

- Gravel and/or fill material to be placed in relatively weed-free areas would come from weed-free sources. Certified weed-free hay bales would be used. Post-construction monitoring and treatment of invasive weeds would be implemented.

- Tamarisk trees would be removed from all portions of the right-of-way in native areas. In non-native areas, tamarisk trees would be removed as necessary as part of clearing operations. To prevent dispersal of tamarisk propagules, debris would either be burned onsite under an appropriate burning permit or hauled offsite. All loads hauled offsite would be properly covered to prevent the spread of propagules by wind. On federally administered lands, tamarisk debris would be hauled offsite and disposed of at an approved disposal site. Burning on Federal lands would require the approval of the authorized officer.

The portion of the Cibola NWR that would be crossed is dominated by a tamarisk monoculture both within the proposed right-of-way and areas adjacent to the right-of-way; therefore, attempting to control tamarisk in these areas would not be practical. During the scoping process, representatives from the Cibola NWR suggested that North Baja offset Project-related impacts on vegetation in the Cibola NWR by conducting tamarisk control outside the Project area in native stands of mesquite for a period of 3 to 4 years. Specific restoration measures conducted within the Cibola NWR would be determined during easement negotiations with the NWR.

North Baja would continue to conduct surveys for non-native plant species after construction is complete. The results of these surveys would be compared to the preconstruction surveys and to surveys from prior years to determine locations of weed infestations attributable to the Project. North Baja would conduct surveys and implement control measures (e.g., herbicide application, pulling by hand as permitted by landowner or land management agency) at Project-related infestations twice a year for 2 years after construction is complete or until the infestations have been controlled. North Baja would also implement weed control measures annually as part of routine operation and maintenance of the pipeline.

Implementation of the mitigation measures proposed by North Baja would reduce the potential for the Project to introduce new, or lead to the expanded range of existing, invasive noxious weed species or soil pests, so that they interfere with crop production or successful revegetation of natural communities to a less than significant level.

4.5.6 No Project Alternative

Under the No Project Alternative, the FERC would deny North Baja's application for a Certificate and a Presidential Permit amendment, the CSLC would deny North Baja's application for an amendment to its right-of-way lease across California's Sovereign and School Lands, and the BLM would deny North Baja's application to amend its existing Right-of-Way Grant and obtain a Temporary Use Permit for the portion of the Project on Federal lands. The No Project Alternative means that the Project would not go forward and the Project-related facilities would not be installed. Accordingly, none of the potential impacts on vegetation identified for the construction and operation of the proposed Project would occur.

Because the proposed Project is privately funded, it is unknown whether North Baja would fund another energy project in California. However, should the No Project Alternative be selected, the energy needs identified in Section 1.1 would likely be addressed through other means, such as through other LNG or natural gas-related pipeline projects. Such projects may result in potential environmental impacts of the nature and magnitude of the proposed Project as well as impacts particular to their respective configurations and operations; however, these impacts cannot be predicted with any certainty at this time.

4.6 WILDLIFE AND AQUATIC RESOURCES

4.6.1 Significance Criteria

An adverse impact on wildlife and aquatic resources would be considered significant and would require mitigation if Project construction or operation would:

- change the diversity or substantially alter the numbers of a local population of any wildlife or aquatic species, or interfere with the survival, growth, or reproduction of affected wildlife and fish populations;
- substantially interfere with the movement or range of migratory birds and other wildlife, or the movement, range, or spawning of any resident or anadromous fish;
- substantially reduce the abundance of species under the protection of the Migratory Bird Treaty Act;
- result in a substantial long-term loss of existing wildlife or aquatic habitat;
- cause substantial deterioration of existing fish habitat; or
- create a potential health hazard or involve the use, production, or disposal of materials that pose a hazard to wildlife or fish populations in the Project area.

4.6.2 Wildlife

4.6.2.1 Existing Wildlife Resources

In general, large mammals, except for the coyote, are unusual in the Project area (Brown 1982). However, mule deer, desert bighorn sheep, mountain lion, and wild horses and burros could occur as transients. Most of the mammals common to the general Project area have adapted to high diurnal temperatures by spending much of the day underground or aestivating. Consequently, the area may host large populations of burrowing rodents.

With the exception of microphyll woodlands, the open, sparsely vegetated habitats of the Project area do not typically support diverse avifauna that are usually associated with structurally taller and denser habitats found in areas receiving more annual rainfall (Brown 1982). The Project area's avian inhabitants are largely arid-adapted desert species.

Rock outcrops, bajadas,[1] washes, and gravel plains each support a varied and often different herpetofauna; however, certain species are common across most habitats (Brown 1982).

Pipeline Facilities

As described in Section 4.5, the proposed pipeline facilities would cross five distinct upland vegetation communities. Each of these communities provides nesting, cover, and foraging habitat for a variety of wildlife. Other resources including open water and wetland habitats also provide these same functions for wildlife species. Impacts on these resources are described and quantified in Sections 4.3.2, 4.4, and 4.5, respectively. Table 4.6.2-1 identifies some of the wildlife species that are common to these

[1] Bajadas generally consist of shallow slopes at the base of rocky hills, typically exhibiting deep soils and a more complex soil structure that retains water and supports a diverse vegetation community.

habitats. The most prevalent habitat is creosote bush scrub, accounting for about 60 percent of the wildlife habitat that would be affected. Although creosote bush scrub is the most common habitat type affected by the Project, many more wildlife species depend on desert wash woodland and wetland areas for their sources of water, cover, and forage. Desert wash woodlands account for about 5 percent and wetlands account for about 2 percent of the habitat affected. The urban/ruderal community, which provides the least favorable wildlife habitat, is the next most prevalent community accounting for about 24 percent of the habitat affected. Other habitats that would be affected are agricultural (6 percent) and desert sand dunes (3 percent).

TABLE 4.6.2-1

Wildlife Species by Habitat Type Common in the North Baja Pipeline Expansion Project Area

Species	Habitat Type
Mammals	Creosote bush scrub/desert wash woodland/wetland/riparian: mountain lion, coyote, mule (burro) deer, desert bighorn sheep, feral burro, coyote, striped skunk, desert shrew, white-tailed antelope, squirrel desert pocket mouse, desert kangaroo rat, Merriam kangaroo rat, white-throated woodrat, long-tailed pocket mouse, round-tailed ground squirrel, desert cottontail rabbit, kit fox, southwestern yellow bat, little brown myotis, western mastiff bat, western pipistrelle, pallid bat, cave myotis, and California myotis.
	Dune areas: Coyote, mule deer, rabbit, ground squirrels, desert kangaroo rat.
	Agricultural/urban/Ruderal: Opossum.
Birds	Sonoran creosote bush scrub/desert wash woodland/wetland/riparian: Burrowing owl, red-tailed hawk, Gambel's quail, cactus wren, Anna's hummingbird, Gila woodpecker, white-winged dove, mourning dove, white-winged dove, greater roadrunner, lesser nighthawk, common raven, verdin, black-tailed gnatcatcher, black-throated sparrow, Say's phoebe, ash-throated flycatcher, and loggerhead shrike.
	Agricultural/Urban/Ruderal Land: European starling, American crow, mockingbird, house finch, and great egret.
Reptiles	Sonoran creosote bush scrub/desert wash woodland/wetland/riparian: Desert glossy snake, western whiptail, sidewinder, southern desert whiptail, gopher snake, chuckwalla, Mojave fringe-toed lizard, Colorado fringe-toed lizard, side-blotched lizard, desert night lizard, zebra-tailed lizard, side-blotched lizard.
	Dune areas: banded gecko, flat-tailed horned lizard (edges of sand dune area).

Sources: Holland and Keil 1995; BLM 2006.

Aboveground Facilities

Wildlife use of the areas of the proposed aboveground facility sites is similar to adjacent habitats. Limited wildlife habitat exists in the agricultural land adjacent to the Ehrenberg Compressor Station and the El Paso Meter Station. The Blythe-Arrowhead Meter Station and pig receiver site consists of the urban/ruderal community within an existing, fenced compressor station site; consequently, wildlife habitat is minimal. Wildlife use of the Rannells Trap site is similar to that described above for creosote bush scrub habitats. Wildlife use of the Ogilby Meter Station location is limited due to the disturbed nature of the area and its proximity to Interstate 8. The El Centro Meter Station occurs within the urban/ruderal community and would be located within a previously developed area with minimal habitat value.

Valve sites along the B-Line are generally collocated with existing facilities, although four valve sites would be expanded and would permanently affect agricultural and creosote bush scrub habitats. Construction of the three valves along the IID Lateral that would be outside of existing facility sites would affect creosote bush scrub, desert sand dune, and agricultural habitat.

Agricultural habitat would be affected by the construction of the pig launcher, taps, and crossover piping associated with the Arrowhead Extension. Creosote bush scrub habitat would be affected by the

pig launcher and receiver that would be constructed at Rannells Trap and the tap to the B-Line and pig launcher associated with the IID Lateral.

Pipe Storage and Contractor Yards

The proposed pipe storage and contractor yards would all be located in urban/ruderal and creosote bush scrub habitat types at previously disturbed sites.

Access Roads

The construction of new temporary and permanent access roads would primarily affect creosote bush scrub habitat, although agricultural, urban/ruderal, and desert sand dune habitats would also be affected.

4.6.2.2 General Impact and Mitigation

Pipeline Facilities

The impact of the Project on wildlife species and their habitats would vary depending on the requirements of each species and the existing habitat present in the areas crossed by the pipeline facilities. Direct impacts of construction on wildlife would include the displacement of wildlife on the right-of-way and direct mortality of some individuals. Wildlife, such as birds and larger mammals, would leave the vicinity of the right-of-way as construction activities approach. Depending on the season, construction could also disrupt bird courting or nesting and breeding of other wildlife on and adjacent to the right-of-way. Many of these animals may relocate into similar habitats nearby; however, a lack of adequate territorial space could force some animals into suboptimal habitats. This could increase inter- and intra-specific competition and lower reproductive success and survival. The influx and increased density of animals in some undisturbed areas caused by these dislocations could also reduce the reproductive success of animals that are not displaced by construction. Additionally, some smaller, less mobile wildlife, such as small mammals and burrowing species (e.g., burrowing owl, opossums, shrew, rats, mice) and reptiles, could be crushed by construction equipment or trapped in trenches. Bird nests located within the construction work area could be destroyed by clearing activities. The loss of these species could result in a decrease in the food stock available for predators of these species. These effects, however, would cease after construction, and wildlife would return to the newly disturbed areas and adjacent, undisturbed habitats after right-of-way restoration is completed. Additionally, the majority of impacts on native desert vegetation (about 63 percent) would occur over North Baja's previously disturbed existing pipeline right-of-way. Therefore, the proposed Project would not be expected to substantially alter the local wildlife populations.

The cutting, clearing, and/or removal of existing vegetation would also affect wildlife by reducing the amount of available habitat. The degree of impact would depend on the type of habitat affected and the rate at which vegetation regenerates after construction. The impact on urban/ruderal habitats (374.0 acres) would be minor because they provide minimal habitat value and would be restored to near original condition following construction. The impact on agricultural habitats (93.5 acres) would be relatively minor because these areas receive regular disturbance (e.g., crop planting, harvesting,) and would be replanted either immediately following, or during the next growing season following construction.

However, native desert upland habitats could take up to 50 years to become re-established. About 942.1 acres of creosote bush scrub, 82.9 acres of desert wash woodland, and about 41.1 acres of desert sand dune habitats would be affected by the Project. The effect on these areas would be much

greater because these native desert habitats would take the longest amount of time to regenerate. The impact on dune habitat would be less than on other desert habitats because wildlife has adapted to the existing minimal vegetative cover that is common to these areas. In general, the effects on native desert habitats are not expected to have a significant impact on wildlife populations because the amounts of the habitats that would be affected are relatively minor compared to the amounts present in the surrounding areas. The majority of the right-of-way through desert habitats (96 percent) would be only temporarily expanded and would affect a 25-foot-wide swath of land that is adjacent to the existing previously disturbed construction right-of-way used for the A-Line. In addition, approximately 99 percent of the right-of-way would be adjacent to existing utility or transportation corridors. Furthermore, North Baja's implementation of its CM&R Plan would improve the potential for successful revegetation of the right-of-way in the long term (see Section 4.5.3 and Appendix E). Although the loss of native desert habitats would be long term, the loss would amount to less than 0.01 percent of the regionally available habitat; therefore, the potential for the Project to change the diversity or substantially alter the numbers of a local population of any wildlife species, or interfere with the survival, growth, or reproduction of affected wildlife, or result in a substantial long-term loss of existing wildlife habitat is less than significant.

Construction of the B-Line would result in a 105-foot-wide cleared right-of-way for a majority of its length that could contribute to habitat fragmentation and affect the movement of wildlife species. However, this impact would be minimized because North Baja would overlap the majority of its construction right-of-way (80 feet) onto the previously cleared right-of-way used to construct the A-Line. Because, in general, construction of the B-Line would result in about 25 feet of new disturbance adjacent to an existing disturbed right-of-way, the potential for the Project to substantially interfere with the movement or range of wildlife species would be less than significant.

The B-Line and IID Lateral would cross several areas of wetland and numerous open water systems (rivers, canals, and drains). The only undisturbed riparian areas that would be crossed are adjacent to the Colorado River and would be effectively avoided by the use of the HDD crossing method. These areas are important habitats for a number of resident wildlife species although only the Colorado River supports fishery resources. Additionally, North Baja plans to implement the HDD crossing method at four other waterbody crossings and would avoid in-stream impacts at most other canals and drains by crossing at locations where these features are constrained within culverts. These crossing plans would minimize impacts on open water habitats. The only open water habitat that would be disturbed would be Rannells Drain. Rannells Drain is an agricultural drain that is subject to the clearing of vegetation periodically by the PVID. Disturbance to this habitat would be minimized through implementation of North Baja's CM&R Plan (see Appendix E).

Following construction and restoration, North Baja would monitor the revegetation of the right-of-way in areas of desert vegetation through the year 2012. Post-construction monitoring would be conducted in all other areas for a period of 2 years following construction.

Fires inadvertently started by construction activities (e.g., welding), equipment, or personnel could also affect wildlife in the Project area by igniting vegetation along the right-of-way. This habitat loss could cause crowding in adjacent habitats reducing productivity and increasing stress-induced mortality. Fire would likely have temporary impacts on urban/ruderal and agricultural communities and longer-term impacts on native desert communities. North Baja has developed a Fire Prevention and Suppression Plan to minimize the potential for wildfires (see Appendix N). Some of the measures contained in the plan include: requiring the contractor to train all personnel on fire prevention measures, restricting smoking and parking to cleared areas, requiring all combustion engines to be equipped with a spark arrestor, and requiring vehicles and equipment to maintain a supply of fire suppression equipment (e.g., shovels and fire extinguishers). A Fire Guard would be assigned to each construction spread that

would be responsible for maintaining contact with local fire control agencies. North Baja would restrict activities on Federal lands during conditions of high fire danger in coordination with the BLM.

Aboveground Facilities

At the Ehrenberg Compressor Station, 0.7 acre of urban/ruderal habitat would be temporarily disturbed; however, there would be no permanent impacts on habitat. At the Ogilby Meter Station, 0.2 acre of the urban/ruderal cover type would be permanently affected by the construction of a pig launcher and receiver. Construction of the El Centro Meter Station would occur within an existing industrial facility site and would temporarily affect 2.5 acres of urban/ruderal habitat, while 0.2 acre would be affected permanently.

Valve sites along the B-Line are generally collocated with existing facilities, although four would permanently affect 0.3 acre of urban/ruderal habitat and 0.8 acre of creosote bush scrub habitat. The installation of three valves along the IID Lateral would affect less than 0.1 acre each of desert sand dune, creosote bush scrub, and agricultural habitats.

Construction of the pig launcher, taps, and crossover piping associated with the Arrowhead Extension would permanently affect about 0.8 acre of agricultural habitat. Permanent impacts on creosote bush scrub habitat would result from the construction of a pig launcher at Rannells Trap (0.3 acre), and the construction of a tap and pig launcher for the IID Lateral (0.2 acre).

The construction, improvement, and modification of access roads would affect a total of 110.9 acres, primarily creosote bush scrub habitat, although agricultural (8.4 acres), urban/ruderal (1.3 acres), desert sand dune (0.9 acre), and desert wash woodland (0.3 acre) habitats would also be affected. About 0.1 acre of creosote bush scrub and less than 0.1 acre of urban/ruderal habitat would be permanently affected by the construction of two permanent access roads.

Pipe Storage and Contractor Yards

The temporary use of four pipe storage and contractor yards would affect 68.1 acres of urban/ruderal habitat and 5.0 acres creosote bush scrub habitat. As previously discussed, the urban/ruderal community provides minimal habitat values. The area of creosote bush scrub has been previously disturbed. No permanent impacts on wildlife would result from the use of these sites.

4.6.2.3 Migratory Birds

A variety of migratory bird species, including both songbirds and raptors, utilize the vegetation communities identified within the Project area. Migratory birds are species that nest in the United States and Canada during the summer, and then migrate south to the tropical regions of Mexico, Central and South America, and the Caribbean for the non-breeding season. The North Baja Pipeline Expansion Project lies within the Sonoran/Mohave bird conservation region as identified by the U.S. North American Bird Conservation Initiative (NABCI) Committee.[2] Of the 61 migratory bird species likely to occur within the Project area, 28 species are considered by the FWS to be birds of conservation concern including but not limited to: the burrowing owl, Crissal thrasher, Le Conte's thrasher, and Gila woodpecker (FWS 2002a). General impacts on migratory birds are discussed below; specific impacts on many of these species are discussed in Section 4.7.

[2] The NABCI Committee is a coalition of government agencies, private organizations, and bird initiatives in the United States working to advance integrated bird conservation (NABCI 2006).

Executive Order 13186 (January 2001) directs Federal agencies to consider the effects of agency actions and plans on migratory birds, with emphasis on species of concern. The California Species Preservation Act of 1970 (California Fish and Game Code, sections 900 to 903), which is administered by the CDFG, prohibits the taking or possessing of any bird egg or nest. Native desert habitats, including desert wash woodland habitat, provide some of the most significant habitat for migratory birds within the Project area. The majority of this habitat occurs along the portion of the B-Line that would be constructed over a 4- to 6-month period in the latter part of 2009 (see Section 2.4). This proposed construction schedule would partially overlap the nesting season (February through September) for a majority of the migratory birds in the Project area, which could result in the mortality of eggs and young birds that have not yet fledged.

The North Baja Pipeline Expansion Project would also result in short-term and long-term losses of habitat available to migratory birds. Short-term losses of habitat available for use by migratory birds would include 86.8 acres of agricultural habitat, and 35.7 acres of wetland/riparian vegetation. Because these habitats would quickly recover following construction, they would be available for use by migratory birds during the next nesting season following construction.

Construction of the Project would disturb a total of 1,174.2 acres of desert habitat including 1,049.0 acres of creosote bush scrub, 83.2 acres of desert wash woodland, and 42.0 acres of desert sand dune habitat, which would result in long-term losses of habitat available for use by migratory birds because these habitats would require many years to recover following construction. Along the B-Line, this loss of habitat would be minimized by North Baja's proposal to overlap its construction right-of-way over the previously disturbed right-of-way reducing new long-term habitat loss by 671.6 acres. Additionally, North Baja would reduce the right-of-way width from 105 feet to 80 feet in 16 areas of microphyll woodlands, which would reduce impacts on this desert wash woodland habitat by 5.6 acres. North Baja would also preserve individual trees within the construction right-of-way where possible. Construction along the IID Lateral would not result in a significant loss of habitat as only 142.6 acres of native desert habitats would be disturbed of which about 42 acres would occur in the dunes area. Because the existing vegetation resources in the dunes area are sparse, the long-term loss of vegetation would have a minimal effect on migratory bird habitat in this area. Of the remaining 100.6 acres of desert habitat affected by the IID Lateral, 98 percent would occur within or immediately adjacent to existing disturbed utility and transportation rights-of-way. The measures contained in North Baja's CM&R Plan would promote revegetation of disturbed areas by restoring original contours, segregating topsoil where grading is required, and respreading cut vegetation over the restored areas.

Although the loss of native desert habitats that would be utilized by migratory birds would be long term, 66 percent of the habitat would be previously disturbed, and a majority of the affected habitat would occur within or immediately adjacent to existing disturbed utility and transportation rights-of-way. In addition, the loss would amount to less than 0.01 percent of the regionally available Sonoran desert habitat; therefore, the potential for the Project to substantially interfere with the movement or range of migratory birds would be less than significant.

North Baja would attempt to schedule construction in native habitats outside of the breeding season for migratory birds. If, however, construction activities are necessary during the bird breeding season, in accordance with its CM&R Plan, North Baja would remove vegetation that could provide nesting substrate from the right-of-way before the breeding season, thus eliminating the possibility that birds could nest on the right-of-way. Qualified biologists would conduct preconstruction surveys to confirm the absence of nesting birds before construction begins.

If, in spite of vegetation removal, nesting birds are found on the construction right-of-way, the nest would not be removed until fledging has occurred or unless authorized after consultation with the FWS, the CDFG, and, if the nest is located on Federal lands, the Federal land management agency.

Although North Baja states that it would preclear vegetation, no details of the preclearing proposal have been provided. Therefore, **the Agency Staffs recommend that:**

- **North Baja shall, in consultation with the FWS, the BLM, and the CDFG, develop Preclearing Plans to protect migratory bird species during construction. These plans shall include specific details of the preclearing methods to be implemented, the specific locations where preclearing would occur, and the dates preclearing would be initiated and completed. North Baja shall file these plans with the FERC and the CSLC for the review and written approval of the Director of OEP and the Executive Officer of the CSLC before initiation of Phase I-A and Phase II construction activities.**

With the implementation of North Baja's proposed measures and the Agency Staffs' recommendation, the Project would not substantially reduce the abundance of species under the protection of the Migratory Bird Treaty Act and, therefore, the impact of the Project on migratory bird species would be less than significant.

4.6.2.4 Sensitive or Managed Wildlife Habitats and Species

The B-Line would cross the Cibola NWR, located about 20 miles south of Blythe along the lower Colorado River, between MPs 29.5 to 33.0. The Cibola NWR encompasses about 16,630 acres of land bisected by the Colorado River and provides habitat for over 240 species of birds, and numerous mammals, including several protected species. The B-Line would cross only a small portion of the NWR, on the western edge of the refuge through monotypic tamarisk stands that provide very low quality wildlife habitat.

On BLM lands between MPs 29.2 and 52.0, the B-Line would cross two SMAs in the vicinity of the Milpitas Wash. Between MPs 29.2 and 33.8, the area is managed by the BLM Yuma Field Office as an SMA under the Yuma District Plan. The Yuma District Plan designates the 4,760-acre area as an SMA for its undisturbed desert vegetation, wildlife habitat, and cultural resources (BLM 1985). Between MPs 33.8 and 52.0, the area is managed by the BLM El Centro Field Office as a Wildlife Habitat Area under the Milpitas Wash Wildlife Habitat Management Plan (BLM 1986). Management objectives for this 180,800-acre area include consolidation, protection, and enhancement of wildlife habitat and habitat for plants of special management concern; expansion of habitat used by burro deer and other native wildlife species; consideration of wildlife species in development and management decisions; and obtaining good ecological condition of 70 percent of the area covered by the habitat management plan.

The Project would cross a Wildlife Habitat Management Area (WHMA) established under the NECO Plan. The NECO Plan is an amendment to the BLM's CDCA Plan and includes most of the California portion of the Sonoran Desert ecosystem. The B-Line would cross a WHMA for 14.8 miles between approximate MPs 35.2 and 50.0. The WHMA is designated as a multi-species WHMA and includes two corridor portions of proposed WHMAs for bighorn sheep between MPs 35.2 and 42.0 and MPs 49.0 and 50.0, although no bighorn sheep habitat is included. The management goals for this area include the maintenance of naturally occurring distributions of 28 special status animal species and 30 special status plant species in the planning area; the maintenance of proper functioning condition in all natural communities with special emphasis on communities that: (a) are present in small quantity, (b) have a high species richness, and (c) support many special status species; and the maintenance of

ecological processes by maintaining naturally occurring interrelationships among various biotic and abiotic elements of the environment (BLM 2002).

As described in Section 4.7, North Baja proposes a number of conservation measures protecting wildlife and special status plants that are generally consistent with objectives of the management plans addressing activities in the Milpitas Wash SMA and the multi-species WHMA. Although much of the Cibola NWR near the proposed pipeline route is dominated by relatively poor quality habitat (tamarisk monoculture), overall the refuge is inhabited by a diverse species community. Construction of the North Baja Pipeline Expansion Project would not directly affect sensitive wildlife habitat within the refuge. Noise associated with construction activities could, however, indirectly impact wildlife by temporarily displacing wildlife from areas within the refuge that would be near the construction right-of-way. The impact would be greater if construction activities coincide with the breeding season of wildlife that use the refuge. Because of the year-round vehicle and boat traffic associated with SR 78 and the Colorado River, wildlife in the area is expected to be somewhat acclimated to noise.

The BLM manages wild horse and burro herds in accordance with the Wild and Free Roaming Horses and Burros Act, which was passed by the U.S. Congress in 1971 to protect, manage, and control wild horses and burros on the public lands. Through the BLM planning process, the areas where wild horses and burros can be managed as a component of the public land have been designated as Herd Management Areas (HMAs). In Arizona, the Project would cross a small portion of the Cibola-Trigo HMA where there is a slight potential that wild horses and/or burros could be found watering at the Colorado River crossing. In California, the B-Line would cross the Chocolate-Mules HMA between approximate MPs 34.9 and 75.3 where there is a slight potential for wild burros to occur. Precipitation within the Project area would increase the potential for wild horses or burros to occur. Construction of the pipeline could affect wild horses or burros if the animals were to fall into the open trench. The BLM commented that mitigation measures to prevent animals from being trapped in the open trench, specifically measures to be implemented to minimize impact on desert tortoise, would be sufficient to minimize impacts on wild horse and burro herds. As discussed in Section 4.7.4.3, North Baja would install tortoise escape ramps in the excavated trench at 1-mile intervals.

The Nature Conservancy, with assistance from others, completed *An Ecological Analysis of Conservation Priorities in the Sonoran Desert Ecoregion* (Ecological Analysis) (Marshall et al. 2000). The objective of the Ecological Analysis was to identify landscape-scale conservation sites that, with proper management, would help ensure the long-term persistence of the biodiversity in the Sonoran Desert. Generally, these conservation sites are areas containing sensitive vegetative communities or rare species at a density considered ecologically significant by regional experts. One of the 100 landscape-scale conservation sites identified by the Ecological Analysis would be crossed by the B-Line at MP 0.2. This 434,141-acre conservation site includes the Colorado River and adjacent riparian areas. The Ecological Analysis reports 31 sensitive species or biotic communities associated with the river, including 18 species with protected status under Federal or State laws. The Colorado River and adjacent riparian habitat would be avoided by the HDD crossing of the river.

The IID Lateral would be adjacent to the East Mesa ACEC and flat-tailed horned lizard management area, which was designated to protect wildlife species (especially the flat-tailed horned lizard). Evan Hewes Highway, an unmaintained frontage road for the adjacent Interstate 8, is the southern border for this ACEC. The IID Lateral would be within the road right-of-way, just outside of the management area (Flat-tailed Horned Lizard Interagency Coordinating Committee [FTHLICC] 2003). The management area reaches to the road right-of-way just north of MPs 8.5 to 8.8, 9.8 to 14.8, and 15.8 to 21.0. All construction activities would occur within the road right-of-way for Evan Hewes Highway.

Impacts on sensitive or managed wildlife habitats and species are not expected to substantially affect local wildlife populations or adversely affect biological diversity in the region.

4.6.3 Aquatic Resources

4.6.3.1 Existing Aquatic Resources

Pipeline Facilities

Fishery resources in the waterbodies that would be crossed by the B-Line are limited to the Colorado River (MP 0.2), the All-American Canal (MP 79.8), and the 33 irrigation canals and drains in the PVID near Blythe, California (MPs 0.2 to 11.7 of the B-Line and MPs 0.0 to 2.1 of the Arrowhead Extension). Fishery resources in the waterbodies that would be crossed by the IID Lateral are limited to the All-American Canal (MPs 2.4 and 8.1), the East Highline Canal (MP 27.5), the Alamo River (MP 32.3), and 36 other irrigation canals and drains.

The CDFG classifies the Colorado River as a warmwater fishery (CDFG 2000). Representative fish species in the Colorado River include bass, bluegill, crappie, catfish, carp, sunfish, and sucker. The CDFG has indicated that the fish species found in some reaches of the larger irrigation canals associated with the Colorado River are similar to those in the Colorado River (Hayes 2000). However, the irrigation canals and the Alamo River do not have a classified fishery.

In the Project area, the Colorado River flows have been reduced and confined behind a series of dams, forming large reservoirs. The normal heavy silt load has been reduced with reservoirs acting as settling basins. This change in the flow of the river has led to a deposition of salts, fertilizers, and other products of irrigation and agriculture in the sediments of the river and has altered fish fauna composition over the last 100 years.

The B-Line would also cross 265 dry desert washes. Because flow in these washes is minimal and limited to the time period following rain events, aquatic ecosystems have not developed in these washes. However, as discussed in Section 4.6.2, the washes provide habitat for terrestrial wildlife species.

Potential habitat for the razorback sucker, a Federal- and State-listed endangered fish species, occurs in the Colorado River. Details regarding this species are found in Section 4.7.3. No other Federal or State-listed special status fish species are known to occur in the surface waters crossed by the proposed pipeline routes.

There is no designated Essential Fish Habitat in the Project area.

Aboveground Facilities

There are no surface waters within or immediately adjacent to the boundaries of the aboveground facility sites; therefore, no fishery resources would be affected by the construction or operation of the aboveground facilities.

Pipe Storage and Contractor Yards

There are no surface waters within or immediately adjacent to the proposed pipe storage and contractor yards; therefore, no fishery resources would be affected by use of the yards.

Access Roads

No surface waters or fishery resources would be affected by use of the access roads.

4.6.3.2 General Impact and Mitigation

Construction of the pipeline across waterbodies would increase the sedimentation and turbidity of the water, the potential for streambank erosion, and the potential for fuel and chemical spills. These effects could impact aquatic resources. Construction-related impacts on aquatic resources could also result from in-stream blasting, hydrostatic testing, and water withdrawals for dust control. No in-stream blasting would be required. The remaining impacts are discussed in more detail below. The degree of impact would depend on the proposed crossing method, the existing conditions at each crossing location, the mitigation measures employed, and the timing of construction.

Sedimentation and Turbidity

Sedimentation can adversely affect fish eggs and juvenile fish survival, benthic community diversity and health, and spawning habitat. The B-Line and the IID Lateral would cross several flowing waterbodies, mostly irrigation canals and ditches in the PVID and the IID that would be crossed by boring or installing the pipeline between drain culverts and roads. The Colorado River, All-American Canal, and East Highline Canal would be crossed using the HDD method. Only one flowing waterbody, Rannells Drain, would be crossed using the open-cut crossing method. Two unnamed canals along the Arrowhead Extension would also be crossed using the open-cut crossing method.

The open-cut crossing method is a wet trench method and has a higher potential for sedimentation and turbidity than the other crossing methods. However, the open-cut method is also the quickest crossing method. Because the effects of increased sedimentation and turbidity are generally limited to the period of in-stream work, the duration of these effects would be relatively short. Additional discussion on the potential impacts associated with the proposed open-cut crossing of Rannells Drain is provided in Section 4.6.3.3.

Streambank Erosion

Waterbodies crossed by the proposed Project facilities that would be susceptible to streambank erosion are primarily limited to perennial rivers and major canals. Crossing these features using the HDD method would avoid disturbance of the streambank vegetation. Retaining the existing bank composition at these waterbodies would prevent the need for bank armoring following construction. Irrigation canals and drains would be crossed at locations where these waterbodies are constrained within culverts, which would avoid any bank disturbance. Clearing of vegetation at intermittent waterbodies (dry washes) would not be expected to increase the susceptibility of those features to streambank erosion due to the limited flow in each waterbody. Further, adherence to North Baja's CM&R Plan would facilitate revegetation of the banks following construction. Therefore, impacts on streambank erosion from the proposed Project would be less than significant.

Fuel and Chemical Spills

A chemical or fuel spill in or near a waterbody could release contaminants, which could affect fish directly or indirectly through changes in food sources or by contaminating the water resources. North Baja would adhere to the measures detailed in its CM&R Plan (Appendix E) and the SPCC Plan (Appendix F) to prevent a large spill from occurring near surface waters. Hazardous materials storage and vehicle or equipment refueling would be restricted within 100 feet of surface waters. Should a spill occur, the implementation of the measures in the SPCC Plan, such as maintaining adequate emergency response equipment, would decrease the response time for control and cleanup of the spill and minimize exposure of aquatic resources to hazardous materials released into a waterbody. Although some individual fish or invertebrates could be harmed by a spill of hazardous materials into a waterbody, these impacts would not change the numbers of a local population or cause a substantial deterioration of

existing fish habitat. Therefore, the overall impact on aquatic resources from a spill would be less than significant.

Hydrostatic Testing and Dust Control Water Withdrawals

Potential impacts associated with hydrostatic testing and dust control water withdrawals include entrainment of fish, reduced downstream flows, impaired downstream uses associated with water withdrawals, erosion, scouring, and a release of chemical additives associated with hydrostatic test water discharges. North Baja proposes to obtain test water for the B-Line and piping within the Ehrenberg Compressor Station from an existing irrigation canal that withdraws water from the Colorado River just south of North Baja's Ehrenberg Compressor Station property, a well on the Ehrenberg Compressor Station site, or the All-American Canal. Groundwater associated with the well at the compressor station site is hydrologically connected to the Colorado River. The Arrowhead Extension and piping within the Blythe-Arrowhead Meter Station would be tested with water obtained from the PVID, local wells, or a commercial water source. The IID Lateral would be tested in sections with water obtained directly from the All-American Canal. These same sources of water are expected to be used for dust control. North Baja would screen intake piping to prevent fish and fish egg entrainment during hydrostatic test water withdrawal. In Section 4.3.4, the Agency Staffs have recommended that North Baja file a revised Dust Control Plan that specifies the sources of water that would be used for dust control, the anticipated quantities of water that would be required, and measures to minimize fish and fish egg entrainment during dust control water withdrawals. Because water withdrawals would occur from existing wells, irrigation canals, or commercial water sources and would not affect current flow levels in the Colorado River or other waterbodies containing fishery resources, and fish and fish egg entrainment would be minimized during water withdrawals, the effects of the proposed Project on the movement, range, or spawning of resident fish would be less than significant.

After hydrostatic testing, the water would be discharged into irrigation canals or returned to the All-American Canal. No chemicals would be added to the test water, and energy dissipation devices would be employed to minimize channel erosion. Dust control water would be sprayed directly on the ground surface. Therefore, changes in water quality would not be expected from hydrostatic testing or dust control activities. Implementation of these measures would reduce impacts on fishery resources to less than significant levels.

Timing of Construction

The degree of impact associated with in-stream activities can be affected by the season of construction. Construction during periods of sensitive fish activities (i.e., spawning and migration) can have a greater impact on fish than construction during other periods. Because in-stream activities would only occur at Rannells Drain and two unnamed canals that do not support fisheries resources, there would be no impact on fish spawning and migration from construction of the proposed Project.

4.6.3.3 Site-specific Impact and Mitigation

The proposed open-cut trenching through Rannells Drain would create a temporary increase in sediment load in the drain. The PVID cleared and dredged the drain in 2002 before the construction of the A-Line, but the drain has subsequently revegetated with tamarisk, *Arundo* sp., and native vegetation, and has limited free water. The PVID has indicated it would be willing to perform maintenance clearing/dredging at the Rannells Drain crossing before construction of the B-Line in 2009, as long as it is done between August 2 and March 14 as agreed with the CDFG.

Rannells Drain is connected to the Colorado River through the Palo Verde Lagoon and a series of other drainage structures, but is generally unsuitable as fish habitat because of its shallow depth and

stagnant conditions. As such, Rannells Drain does not have a classified fishery and no fisheries habitat would be lost as a result of construction across Rannells Drain. Nonetheless, North Baja proposes to use sediment booms downstream of the trenching, which would contain sedimentation to the localized area. Any sediment potentially released during construction would be removed the next time the PVID dredges the drain for agricultural purposes (expected to occur 1 year after construction) and would not be a permanent addition to the aquatic environment.

North Baja proposes to cross the Colorado River, the All-American Canal, and the East Highline Canal using the HDD method. Although the HDD method avoids in-stream impacts because it eliminates the need for in-stream excavation, it does not completely eliminate the possibility of impacts on aquatic resources due to the possibility of a frac-out into the waterbody (see Section 4.3.3.3). Drilling mud primarily consists of water mixed with bentonite, which is a naturally occurring clay material. A frac-out could occur if the drilling head hits a subterranean fracture in the substrate. When the drilling mud reaches the fracture, it can follow the fracture up or otherwise be forced to the surface or into the water if drilling is occurring under a waterbody. If drilling mud is released into the water, the settling bentonite could cover fish or amphibian eggs and cut off their oxygen supply. Bentonite has not been shown to adversely affect gills or feeding of fish or invertebrates.

During construction of the A-Line, there were no inadvertent releases of drilling mud into the Colorado River or the All-American Canal, and none is expected during construction of the B-Line and IID Lateral. However, North Baja has prepared an HDD Plan (see Appendix G) that requires North Baja to continuously monitor the drilling operations. If monitoring indicates an in-stream release, the EIs would immediately notify North Baja's construction management personnel. North Baja would notify the appropriate Federal and State agencies as soon as possible of an in-stream release event, detailing the nature of the release and corrective actions being taken. The notified agencies would determine whether additional measures need to be implemented. If it is determined that the release cannot be remedied without causing additional environmental impact, North Baja would request agency approval to continue the drilling operations. If a release occurs that may migrate downstream and affect water quality, downstream water users would be contacted by North Baja. The contacts and telephone numbers of downstream users would be assembled before commencement of construction, and maintained on site. Implementation of these measures would minimize adverse impacts of a frac-out in or near these waters on the aquatic communities to less than significant levels. Minimizing the effects of a frac-out in accordance with North Baja's HDD Plan would also prevent the substantial deterioration of existing fish habitat.

4.6.4 No Project Alternative

Under the No Project Alternative, the FERC would deny North Baja's application for a Certificate and a Presidential Permit amendment, the CSLC would deny North Baja's application for an amendment to its right-of-way lease across California's Sovereign and School Lands, and the BLM would deny North Baja's application to amend its existing Right-of-Way Grant and obtain a Temporary Use Permit for the portion of the Project on Federal lands. The No Project Alternative means that the Project would not go forward and the Project-related facilities would not be installed. Accordingly, none of the potential impacts on wildlife and aquatic resources identified for the construction and operation of the proposed Project would occur.

Because the proposed Project is privately funded, it is unknown whether North Baja would fund another energy project in California. However, should the No Project Alternative be selected, the energy needs identified in Section 1.1 would likely be addressed through other means, such as through other LNG or natural gas-related pipeline projects. Such projects may result in potential environmental impacts of the nature and magnitude of the proposed Project as well as impacts particular to their respective configurations and operations; however, these impacts cannot be predicted with any certainty at this time.

4.7 SPECIAL STATUS SPECIES

4.7.1 Significance Criteria

An adverse impact on federally or State-listed or other special status species would be considered significant and would require mitigation if Project construction or operation would:

- reduce the abundance of sensitive species that occur within the Project area;
- result in the loss or alteration of designated or proposed critical habitat for one or more listed species;
- cause a temporary loss or alteration of habitat important for one or more listed species that could cause increased mortality or lowered reproductive success of the species (i.e., avoidance for greater than one breeding season);
- result in direct or indirect impacts on candidate or sensitive species populations, or habitat, that would contribute to or result in the Federal or State listing of the species (e.g., by substantially reducing species numbers or by resulting in the permanent loss of habitat essential for the continued existence of a species); or
- create a potential health hazard or involve the use, production, or disposal of materials that pose a hazard to special status species populations in the Project area.

4.7.2 Regulatory Requirements and Species Identification

Federal agencies are required by section 7 of the ESA (Title 19 USC Part 1536[c]), as amended (1978, 1979, and 1982), to ensure that any actions authorized, funded, or carried out by the agency do not jeopardize the continued existence of a federally listed endangered or threatened species, or result in the destruction or adverse modification of designated critical habitat of a federally listed species. The action agency (e.g., the FERC) is required to consult with the FWS and/or the U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Service (NOAA Fisheries) to determine whether federally listed endangered or threatened species or designated critical habitat are found in the vicinity of the proposed Project, and to determine the proposed action's potential effects on those species or critical habitats. For actions involving major construction activities with the potential to affect listed species or designated critical habitat, the Federal agency must submit its Biological Assessment (BA) to the FWS and/or NOAA Fisheries and, if it is determined that the action may adversely affect a listed species, the Federal agency must submit a request for formal consultation to comply with section 7 of the ESA. In response, the FWS and/or the NOAA Fisheries would issue a Biological Opinion (BO) as to whether or not the Federal action would likely jeopardize the continued existence of a listed species, or result in the destruction or adverse modification of designated critical habitat.

In compliance with section 7 of the ESA, the FERC requested that the FWS consider the draft EIS/EIR, along with various survey reports prepared by North Baja, as the BA for the North Baja Pipeline Expansion Project. No species under NOAA Fisheries' jurisdiction would be affected by the proposed Project. On April 20, 2007, the FWS issued the BO (see Appendix R).

Under the CEQA, the CSLC must take into account the impacts on special status species. Additionally, California has its own Endangered Species Act (CESA) that requires State agencies to protect and promote the recovery of State-listed endangered or threatened species. Similar to the ESA,

the CESA requires that State lead agencies consult with the CDFG to ensure that actions are not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of essential habitat. In addition to species listed as threatened or endangered under the ESA and CESA, agencies and organizations such as the FWS, the BLM, the CDFG, and the California Native Plant Society (CNPS) maintain lists of special concern, sensitive, or rare species that are also appropriate to consider in this NEPA and CEQA analysis.

For purposes of this environmental analysis, special status plants and animals include the following:

- species officially listed by California or the Federal government as endangered, threatened, or rare;
- species that are proposed for Federal listing as threatened or endangered or considered candidates for listing;
- species noted as sensitive or of special concern by the FWS, the BLM, the Arizona Game and Fish Department (AGFD), or the CDFG; and
- plants occurring on Lists 1A, 1B, 2, 3, and 4 of the CNPS' *Inventory of Rare and Endangered Vascular Plants of California* (Skinner and Pavlik 1994).

North Baja participated in extensive coordination efforts with the FWS, the BLM, the CDFG, and the AGFD before and during construction of the A-Line. Those efforts were summarized in the final Biological Report for that project and submitted to the agencies in 2002 (North Baja 2002). Building on that information base, and using data from the California Natural Diversity Database (CNDDB), AGFD Heritage Data Management System, and through discussions with plant and wildlife specialists with knowledge of the Project area, North Baja prepared a list of threatened, endangered, and special status species that potentially occur in the vicinity of the proposed Project. In addition to those communications, meetings were held with representatives of the FWS, the BLM, and the CDFG to present an overview of the Project and solicit issues of concern from the agencies.

A total of 51 special status species were identified as potentially occurring within the Project area (see Table 4.7.2-1). Following focused habitat evaluations and species-specific surveys in 2005, 24 of the 51 species were eliminated from consideration due to lack of habitat, lack of potential impact, or both (see Table 4.7.2-1). The remaining 27 species are discussed below.

4.7.3 General Impact and Mitigation

In general, the impacts of the Project on special status species would be the same as described for vegetation, wildlife, and aquatic resources. However, the magnitude and duration of these impacts could be greater for special status species because their distribution and relative abundance usually are more limited. Construction could remove special status plants living within the construction right-of-way and could disturb, displace, or harm special status animals on and adjacent to construction work areas. Construction could also affect special status plants and wildlife by temporarily altering the habitat along the pipeline right-of-way and permanently altering the habitat at aboveground facility sites.

TABLE 4.7.2-1

Special Status Species Initially Identified as Potentially Occurring in the Vicinity of the North Baja Pipeline Expansion Project

Species	Status [a]			Eliminated from Further Consideration	Facility/General Milepost Range Where Species May Occur
	Federal	State	Other		
Mammals					
American badger (*Taxidea taxus*)		SC		Yes. Suitable habitat not present in Project area.	
Arizona myotis (*Myotis occultus*)		SC		Yes. Occasional transient only in Project area.	
Big free-tailed bat (*Nyctinomops macrotis*)		SC		Yes. Occasional transient only in Project area.	
California leaf-nosed bat (*Macrotus californicus*)		SC	BLM-S	Yes. Occasional transient only in Project area.	
Cave myotis (*Myotis velifer*)		SC	BLM-S	Yes. Suitable habitat not present in Project area.	
Colorado River cotton rat (*Sigmodon arizonae plenus*)		SC		No	B-Line: MP 0.2
Desert bighorn sheep (*Ovis canadensis nelsoni*)			BLM-S	No	B-Line: MP 31.0
Pale big-eared bat (*Corynorhinus townsendii pallescens*)		SC		Yes. Occasional transient only in Project area.	
Pallid bat (*Antrozous pallidus*)		SC	BLM-S	Yes. Occasional transient only in Project area.	
Pallid San Diego pocket mouse (*Chaetodipus fallax pallidus*)		SC		Yes. Limited range of species does not include Project area.	
Western mastiff bat (*Eumops perotis californicus*)		SC	BLM-S	Yes. Occasional transient only in Project area.	
Yuma mountain lion (*Puma concolor browni*)		SC		Yes. Suitable habitat not present in Project area.	
Birds					
Arizona Bell's vireo (*Vireo bellii arizonae*)		SE		No	B-Line: MPs 0.0 to 3.0 and 31.0 to 33.0
Bald eagle (*Haliaeetus leucocephalus*)	FT	SE		Yes. No suitable nesting/roosting sites in Project area. Occasional transient only.	
Brown-crested flycatcher (*Myiarchus tyrannulus*)		SC		No	B-Line: MPs 22.0 to 23.0, 35.0 to 36.0, 41.0 to 46.0, 50.0 to 53.0, and 59.0 to 66.0
Brown pelican (*Pelecanus occidentalis*)	FT	SE		Yes. Suitable habitat not present in Project area.	
Burrowing owl (*Athene cunicularia*)		SC	BLM-S	No	B-Line: MPs 0.0 to 12.0 Arrowhead Extension: MPs 0.0 to 2.1 IID Lateral: MPs 28.0 to 46.0
California black rail (*Laterallus jamaicensis coturniculus*)		ST		No	B-Line: MPs 0.0 to 12.0 and 31.0 to 33.0 IID Lateral: MP 33.0
Crissal thrasher (*Toxostoma crissale*)		SC		No	B-Line: MPs 0.0 to 3.0, 24.0 to 29.0, and 31.0 to 33.0
Elf owl (*Micrathene whitneyi*)		SE		Yes. Suitable habitat not present in Project area.	

TABLE 4.7.2-1 (cont'd)

Special Status Species Initially Identified as Potentially Occurring in the Vicinity of the North Baja Pipeline Expansion Project

Species	Status [a]			Eliminated from Further Consideration	Facility/General Milepost Range Where Species May Occur
	Federal	State	Other		
Ferruginous hawk (*Buteo regalis*)		SC		No	Occasional migrant in the Project area
Gila woodpecker (*Melanerpes uropygialis*)		SE		No	B-Line: MPs 0.2, 17.6, 21.8, 22.2 to 25.3, 35.6 to 36.4, 46.4, 50.2 to 52.4, 55.5, 59.5, and 64.8 to 65.2
Le Conte's thrasher (*Toxostoma lecontei*)		SC	BLM-S	No	B-Line: MPs 12.0 to 79.8 IID Lateral: MPs 8.0 to 28.0
Sonoran yellow warbler (*Dendroica petechia sonorana*)		SC		Yes. Occasional transient only in Project area.	
Southwestern willow flycatcher (*Empidonax trailii extimus)*	FE	SE		No	B-Line: MPs 0.0, 25.0, and 33.0
Summer tanager (*Piranga rubra*)		SC		No	B-Line: MPs 22.0 to 23.0, 35.0 to 36.0, 41.0 to 46.0, 50.0 to 53.0, and 59.0 to 66.0
Vermilion flycatcher (*Pyrocephalus rubinus*)		SC		No	B-Line: MPs 0.0 to 12.0, 22.0 to 29.0, 31.0 to 33.0, 35.0 to 53.0, 59.0 to 66.0, and 79.0 to 79.8
Western yellow-billed cuckoo (*Coccyzus americanus occidentalis*)	FC	SE		No	B-Line: MP 0.2
Yellow breasted chat (*Icteria virens*)		SC		No	B-Line: MPs 0.0 to 3.0, 22.0 to 23.0, and 31.0 to 33.0
Yuma clapper rail (*Rallus longirostris yumanensis*)	FE	ST		No	B-Line: MPs 0.0 to 12.0 and 31.0 to 33.0 IID Lateral: MP 32.3
Amphibians/Reptiles					
Colorado River toad (*Bufo alvarius*)		SC		No	B-Line: MP 0.2
Couch's spadefoot toad (*Scaphiopus couchii*)		SC		No	B-Line: MPs 25.0 and 35.3
Desert tortoise (*Gopherus agassizii*)	FT	ST		No	B-Line: MPs 17.0 to 75.2
Flat-tailed horned lizard (*Phrynosoma mcallii*)		SC	BLM-S	No	B-Line: MPs 71.0 to 79.8 IID Lateral: MPs 8.0 to 28.0
Fish					
Bonytail chub (*Gila elegans*)	FE	SR		Yes. Not expected to occur in Project area.	
Desert pupfish (*Cyprinodon macularius*)	FE	SE		Yes. Not expected to occur in Project area.	
Razorback sucker (*Xyrauchen texanus*)	FE	SE		No	B-Line: MPs 0.2 and 24.0 to 31.0
Plants					
Algodones Dune sunflower (*Helianthus niveus tephrodes*)		SE	1B	No	IID Lateral: MPs 0.5 to 7.9
Crucifixion thorn (*Castela emoryi*)			2	Yes. Not expected to occur in Project area. Not identified during previous surveys.	

TABLE 4.7.2-1 (cont'd)

Special Status Species Initially Identified as Potentially Occurring in the Vicinity of the North Baja Pipeline Expansion Project

Species	Status [a]			Eliminated from Further Consideration	Facility/General Milepost Range Where Species May Occur
	Federal	State	Other		
Fairyduster (*Calliandra eriophylla*)			2	No	B-Line: MPs 45.1 to 49.8, 53.6 to 57.4, and 65.1 to 66.6 IID Lateral: MPs 0.5 to 7.9
Giant Spanish-needle (*Palafoxia arida* var. *gigantean*)			1B/BLM-S	No	IID Lateral: MPs 0.5 to 7.9
Glandular ditaxis (*Ditaxis clariana*)			2	Yes. Not expected to occur in Project area. Not identified during previous surveys.	
Harwoods milk-vetch (*Astragalus insularis* var. *harwoodii*)			2	Yes. Not expected to occur in Project area. Not identified during previous surveys.	
Las Animas colubrina (*Colubrina californica*)			2	Yes. Not expected to occur in Project area. Not identified during previous surveys.	
Munz's cholla (*Opuntia munzii*)			1B/BLM-S	Yes. Not expected to occur in Project area. Not identified during previous surveys.	
Peirson's milk-vetch (*Astragalus magdalenae* var. *peirsonii*)	FT	SE	1B	No	B-Line: MPs 72.0 to 79.8 IID Lateral: MPs 0.5 to 7.5
Saguaro (*Carnegiea gigantean*)			2	Yes. Not expected to occur in Project area. Not identified during previous surveys.	
Sand food (*Pholisma sonorae*)			1B	No	IID Lateral: MPs 0.5 to 7.9
Slender woolly-heads (*Nemacaulis denudata* var. *gracilis*)			2	Yes. Not expected to occur in Project area. Not identified during previous surveys.	
Wiggins's cholla (*Opuntia wigginsii*)			3	Yes. Not expected to occur in Project area. Not identified during previous surveys.	
Wiggins's croton (*Croton wigginsii*)		SR	2	No	IID Lateral: MPs 0.5 to 7.9

[a] Status:
FE = Federally listed as endangered
FT = Federally listed as threatened
FC = Candidate for Federal listing as endangered or threatened
SE = California State-listed as endangered
ST = California State-listed as threatened
SR = California State-listed as rare (California Native Plant Protection Act)
SC = Federally/California State-listed as special concern
1B = CNPS list of plants that are rare, threatened, or endangered in California and elsewhere
2 = CNPS list of plants that are rare, threatened, or endangered in California, but more common elsewhere
3 = CNPS list of plants about which more information is needed to determine their status
BLM-S = Bureau of Land Management lists as sensitive

North Baja has proposed to implement the following general minimization and conservation measures to reduce the impact of the Project on special status species:

- North Baja would use its environmental training program, successfully implemented for the A-Line construction, as a basis for a site-specific environmental training program to be implemented before the start of work. All employees and contractors working in the field would be required to complete an environmental training session before beginning work on the right-of-way. The program would include discussions of the biology, distribution, and ecology of special status species within the geographic area of construction; protection afforded such species under applicable Federal and State laws and regulations; all protection measures that must be followed to protect such species during Project activities; penalties for noncompliance; reporting requirements; and the importance of compliance with all protection measures. To ensure proper focus, emphasis would be placed on the specific aspects of compliance applicable to the particular audience's activities on the Project.

- Employees and contractors would be informed during one or more training sessions that they are not authorized to handle or otherwise move listed species at any time, including while commuting to work sites or at a work site.

- North Baja would hire and designate at least two EIs per construction spread who would be responsible for overseeing Project environmental protection measures, including those for special status species. Environmental inspection procedures would be in compliance with the relevant provisions of North Baja's CM&R Plan. North Baja would also hire and designate at least one authorized biologist who would be responsible for identification of habitat and individuals of special status species and for implementation of all measures requiring an authorized biologist's intervention. The biologist would, if needed, hold the required permits or formal agreements with appropriate Federal and State agencies for the survey or handling of any special status species.

- An authorized biologist would conduct species-specific surveys of each Project facility located within areas identified during North Baja's surveys as listed species habitat no more than 7 days before the onset of activities.

- Project personnel would exercise caution when commuting to the construction area to minimize any chance for the inadvertent injury or mortality of species encountered on roads leading to and from the construction area. North Baja's contractors and employees would report all such incidents directly to an EI.

- Only existing routes of travel and approved access roads would be used to and from construction areas. Cross-country travel by vehicles and equipment would be prohibited. Except on county- or State-maintained roads, vehicle and equipment speeds would not exceed 25 miles per hour within potential habitat of a listed species. On the B-Line, between MPs 48.0 and 68.0 (an area of relatively high tortoise density), North Baja states that it would limit vehicle and equipment speeds to 10 miles per hour except for stringing trucks, which North Baja proposes to allow to travel at 25 miles per hour.

- Authorized biologists would monitor all work where prior North Baja surveys have documented the occurrence of one or more listed species and where construction activities can reasonably be expected to adversely affect those species. In conjunction with North Baja's EIs, the biologists would have the authority to halt all non-emergency

actions that might result in harm to a listed species, and would assist in the overall implementation of protection measures for listed species during Project activities.

- All trash and food items generated by construction and maintenance activities would be promptly placed in a closed container and regularly removed from the Project site to reduce the attractiveness of the area to common ravens and other desert predators.

- Firearms and domestic pets would be prohibited from work sites.

- In the construction work area and along access roads, employees and contractors would look under vehicles and equipment for the presence of special status species before movement. If a special status species is observed, no vehicles or equipment would be moved until the animal has left voluntarily or is removed by an authorized biologist.

- Pipeline construction activities between dusk and dawn would be limited to emergencies only (i.e., issues involving human health and safety) with the exception of the HDD operations (including those at the Colorado River, the All-American Canal, Interstate 8, the East Highline Canal) and the open-cut crossing of Rannells Drain.

- Open pipeline trenches, auger holes, or other excavations that could entrap wildlife would be inspected by an authorized biologist a minimum of three times per day, and immediately before backfilling. In habitats supporting special status species, pipe segments would either be capped or taped closed each night or raised on supports of sufficient height to prevent the entry and entrapment of special status species. Such pipe segments would be inspected regularly before sealing and before using in the morning. For open trenches, earthen escape ramps would be maintained at 1-mile intervals. Other excavations that remain open overnight would be covered, ramped, or fenced to prevent entrapment of wildlife.

- If a listed species is located during construction, and a contingency for avoidance, removal, or transplant has not been approved by the FWS or appropriate agency, North Baja would not proceed with Project activities in that location until specific consultation with the FERC, the FWS, the BLM, and/or other appropriate agency is completed.

- All encounters with listed species would be reported to the biologist, who would record the following information:

    - species;
    - location (narrative and maps) and dates of observations;
    - general condition and health, including injuries and state of healing;
    - diagnostic markings, including identification numbers or markers; and
    - locations moved from and to.

- Upon locating a dead or injured listed species, North Baja would notify the FWS and the CDFG in California or the AGFD in Arizona. Written notification would be made within 15 days of the date and time of the finding or incident (if known) and would include: location of the carcass, a photograph, cause of death (if known), and other pertinent information.

- As described in Section 2.2.1, in general, the construction right-of-way would be limited to a width of 105 feet along the B-Line. North Baja proposes to generally use a 100-foot-

wide construction right-of-way for the Arrowhead Extension except when in the Arrowhead Boulevard roadway or road shoulder where a 60-foot-wide construction right-of-way would be used. The construction right-of-way for the IID Lateral would be limited to a width of 60 feet for the majority of its length and 80 feet where it parallels existing utility corridors. The construction right-of-way would be clearly staked and flagged in advance of construction. The construction work area includes approved work areas for the pipelines, compressor station, and meter stations; the facilities at Rannells Trap; the taps, crossover piping, and pig launcher associated with the Arrowhead Extension; access roads; the tap to the B-line and pig launcher associated with the IID Lateral; and staging and pipe storage areas.

- As described in Section 4.6.2.3, North Baja would attempt to schedule construction in native habitats outside of the breeding season for migratory birds. If, however, construction activities are necessary in native habitats during the bird breeding season, North Baja would remove vegetation that could provide nesting substrate from the right-of-way before the breeding season, thus eliminating the possibility that birds could nest on the right-of-way. In accordance with the Agency Staffs' recommendation in Section 4.6.2.3, specific plans relating to preclearing of vegetation would be coordinated with the FWS, the BLM, and the CDFG. Qualified biologists would conduct preconstruction surveys to confirm the absence of nesting birds before construction begins.

- If, in spite of vegetation removal, nesting birds are found on the construction right-of-way, the nest would not be removed until fledging has occurred or unless authorized after consultation with the FWS, the CDFG, and, if the nest is located on Federal lands, the Federal land management agency.

- At specified locations in areas of high-density microphyll woodland (see Table 4.5.3-2), North Baja would narrow the construction right-of-way width to 80 feet. Areas of this narrower construction width would be identified in the field, staked, and flagged in advance of construction.

- At the conclusion of work, all trenches and holes would be completely filled, surfaces cleaned and smoothed, and each site recontoured to match the original profiles as closely as possible.

- With the exception of fenced facilities, all materials and equipment would be removed from the area upon completion of work. All stakes, flagging, and fencing used to delineate and protect any environmental or cultural feature in the construction area would be removed no later than 30 days after construction and restoration are complete.

- Upon completion of Project activities, North Baja would submit a final report to the FERC for distribution to other agencies, including the FWS. The report would document the effectiveness and practicality of the conservation measures, the number of individuals of each species excavated from their burrows or removed from the site, the number of individuals killed or injured, and other pertinent information. The report would also recommend modifications of the Project stipulations in order to enhance the protection of species in the future. In addition, the final report would provide the actual acreage disturbed by Project activities by habitat type.

These measures would be applied Project-wide and would reduce most impacts on special status species to less than significant levels. The Agency Staffs believe, however, that North Baja's proposal to

allow stringing trucks to travel at 25 miles per hour between MPs 48.0 and 68.0 of the B-Line would not adequately protect special status species. North Baja has indicated that limiting vehicles, other than stringing trucks, to 10 miles per hour would provide maximum protection to special status species due to the increased frequency of non-stringing truck traffic along the right-of-way. North Baja further indicated that stringing trucks would enter and exit the right-of-way at locations that minimized the time the trucks were operating along the right-of-way, and that decreasing the allowed speed of the stringing trucks could have schedule and associated cost implications. However, the Agency Staffs continue to have concerns about allowing these large, generally heavily loaded, trucks to operate at an increased speed along the right-of-way in areas of known special status species occurrence given the longer required stop time for these vehicles. Because the speed restriction would only occur along a 20-mile stretch and the restriction would be known well before the construction bids would be prepared, it does not appear that this restriction should significantly impact the construction schedule or costs. Furthermore, limiting the speed of the stringing trucks would aid in dust control, which is a concern of the BLM. Therefore, **the Agency Staffs recommend that:**

- **North Baja shall restrict stringing trucks to a 10-mile-per-hour speed limit on the right-of-way between MPs 48.0 and 68.0 of the B-Line.**

As discussed in Section 2.5, North Baja would employ EIs who would be responsible for overseeing the implementation of environmental protection measures; full-time third-party Compliance Monitors would be present on the construction spreads to monitor compliance with the Project mitigation measures and requirements; and the FERC, CSLC, and BLM staff would conduct periodic inspections of the Project for compliance with the Project's environmental conditions. Other Federal, State, and local agencies would conduct oversight of inspection and monitoring to the extent determined necessary by the individual agency.

Site-specific impacts and species-specific conservation measures are discussed below.

4.7.4 Federally Listed Threatened and Endangered Species

Based on consultations with the Arizona and Carlsbad Field Offices of the FWS as well as the CDFG and a search of the CNDDB, nine federally listed endangered or threatened species or species proposed for listing as endangered or threatened were identified as potentially occurring in the Project area (see Table 4.7.2-1). Following preliminary field surveys and further consultations with the FWS offices, four species were eliminated from further consideration: the bald eagle, brown pelican, bonytail chub, and desert pupfish. These species are only known from sites well away from the proposed Project area. Therefore, the Agency Staffs have determined that there would be *no effect* on these species from construction or operation of the North Baja Pipeline Expansion Project. The Agency Staffs have determined that the proposed Project has the potential to affect the remaining five federally listed species that are known or suspected to occur within the Project area. A discussion of these five species is presented below.

4.7.4.1 Southwestern Willow Flycatcher

The southwestern willow flycatcher is federally and California-listed as endangered. This species breeds in riparian habitats along rivers, streams, or other wetlands where dense growths of willows or other shrubs and medium-sized trees are present. Similar habitats are used during migration. All willow flycatcher subspecies winter in Mexico, Central America, and possibly northern South America, but specific wintering grounds and migration routes for the southwestern subspecies are unknown. Southwestern willow flycatchers are late migrants and typically arrive on their breeding grounds in mid-May where they remain until late-August (Tibbitts et al. 1994).

Surveys for southwestern willow flycatchers were conducted in accordance with FWS survey protocols during May, June, and July 2005 in known areas of habitat along the B-Line as identified during surveys for the A-Line. These areas include the Ehrenberg area (MP 0.0), the Stallard Road area (MP 25.0), and near the Cibola NWR Davis Lake Area (MP 33.0). No breeding southwestern willow flycatchers were identified at any of the habitat locations surveyed along the B-Line in 2005. However, migrants were identified between May 17 and June 12, 2005 at Ehrenberg and between May 16 and June 11, 2005 at Stallard Road. No southwestern willow flycatchers were identified at the Cibola NWR, or during a June 29, 2005 survey or two July 2005 surveys. These results are consistent with the 2001 surveys and the 2002 monitoring efforts conducted at the same locations for the A-Line. There is no suitable habitat for this species along the proposed Arrowhead Extension or the IID Lateral.

Southwestern willow flycatchers are known to migrate through the area that would be crossed by the B-Line, specifically near the Colorado River and in the vicinity of Stallard Road, but there is no evidence of these birds nesting in the area. Although the removal of desert wash woodland trees during the installation of the B-Line would reduce habitat for this species, in accordance with its general conservation measures, North Baja proposes to clear vegetation outside of the breeding season, thereby avoiding impacts on potential breeding individuals. Also, because the habitat loss would occur adjacent to an existing pipeline in the area, clearing would not fragment suitable habitat, but rather would be a minor, incremental loss of desert wash woodland. Nonetheless, if suitable habitat was occupied during clearing, construction could increase stress on migrating flycatchers and increase their susceptibility to predators or reduce their physical condition during the critical migrating period. These potential impacts, however, would not ultimately be expected to occur as there is sufficient desert wash woodland throughout the Project vicinity along the Colorado River and in the Cibola NWR. It is expected that migrating individuals would use these adjacent areas for foraging and cover. Thus, there would be no direct adverse impacts from Project construction on individual birds or bird populations aside from a temporary relocation from one area of suitable habitat to another similar and nearby area. North Baja's implementation of measures included in its CM&R Plan would facilitate the long-term restoration and revegetation of desert wash woodlands affected by construction such that these areas would be suitable for use by migrating flycatchers in the future.

Southwestern willow flycatchers potentially using habitat along the Colorado River could be disturbed by activities associated with the HDD of that waterbody. Specifically, noise and light associated with HDD equipment and activities could dissuade individuals from using habitat in the vicinity of the HDD and/or could interrupt resting individuals. However, because migrating individuals could easily relocate to other nearby areas of suitable resting habitat, adverse impacts on migrants are not expected. To minimize the potential for construction activities to affect southwestern willow flycatchers at the Colorado River crossing, **the Agency Staffs recommend that:**

- **North Baja shall implement the following measures at the Colorado River during activities associated with the HDD:**

  a. all individuals working within or adjacent to southwestern willow flycatcher habitat shall complete southwestern willow flycatcher training <u>before working within the construction right-of-way in those areas</u>; and

  b. dust shall be strictly controlled by watering construction areas within 1,000 feet of potential habitat at the Colorado River.

As a result of North Baja's proposed measures as well as the Agency Staffs' recommendation above and in Section 4.6.2.3, although the North Baja Pipeline Expansion Project may affect habitat used by the southwestern willow flycatcher, the Project is *not likely to adversely affect* the species. Further,

although construction-related disturbances could cause individuals to avoid suitable habitats, with implementation of the measures outlined above, the Agency Staffs believe that disturbances of individuals are unlikely and impacts on the southwestern willow flycatcher associated with the Project would be less than significant.

4.7.4.2 Yuma Clapper Rail

The Yuma clapper rail is federally listed as endangered and California-listed as threatened. In California, the Yuma clapper rail is found between February and August in freshwater and brackish emergent wetlands along the Colorado River and around the Salton Sea. Although this species requires mature stands of cattails and bulrushes for cover, it can be found foraging in adjacent areas of shallow water and mudflats for crayfish, clams, and insects.

Preliminary evaluations along the B-Line indicated that potential habitat for this species is found in freshwater marshes, wetlands, and drains near the Colorado River, the Palo Verde Valley, and the Davis Lake areas (MPs 0.0 to 12.0 and MPs 31.0 to 33.0). A focused survey was conducted at each location of identified potential habitat in 2001 and again in May 2005. The survey was conducted to determine the number and location, if any, of the Yuma clapper rail. Surveys were conducted following a modified survey protocol (survey window extended to May 30, 2005), as discussed with and approved by the FWS on May 10, 2005. Each area of potential habitat was surveyed twice between May 16 and May 25, 2005. No Yuma clapper rails were detected during these survey efforts, consistent with survey and monitoring results from 2001 and 2002 and species records in the area. No potential habitat for the Yuma clapper rail was identified along the proposed Arrowhead Extension.

Preliminary evaluations along the IID Lateral indicated that potential habitat for this species may occur near the Alamo River (MP 32.3). North Baja has not yet conducted surveys for this species at this river crossing.

Although this species was not identified along other areas of the B-Line during previous surveys, in order to avoid impacts on the species during construction of the A-Line, the FWS required that vegetation be cleared before construction in the areas of direct impacts along Rannells Drain as well as an area extending 150 feet on either side of the direct zone of impact. Further, the CDFG has recommended that if Rannells Drain is not cleared before construction, North Baja would be required to conduct surveys for the Yuma clapper rail at this location. North Baja has agreed to conduct these surveys, if necessary. However, North Baja has not proposed conservation measures to avoid impacts on individual Yuma clapper rails if identified during such surveys, nor has North Baja proposed to conduct surveys for the Yuma clapper rail at the Alamo River. Therefore, **the Agency Staffs recommend that:**

- **North Baja shall implement the following measures to minimize impact on the Yuma clapper rail unless North Baja provides documentation from the FWS and the CDFG that such measures are not necessary or if site-specific surveys fail to identify individuals at the Alamo River or Rannells Drain:**

  a. ensure vegetation at the proposed crossing location of Rannells Drain, extending 150 feet on either side of the proposed construction work area, is cleared before February 1, 2009;

  b. ensure vegetation at the proposed crossing location of the Alamo River is cleared before February 1, 2009; and

c. initiate all construction activities at Rannells Drain and the Alamo River between the hours of 8:30 AM and 3:30 PM to avoid periods of peak Yuma clapper rail vocalizations.

Direct impacts on Yuma clapper rail and/or rail habitat along the Colorado River would be avoided through North Baja's proposed HDD crossing of this waterbody and the adjacent habitat. Additionally, the measures recommended by the Agency Staffs to avoid impacts on the southwestern willow flycatcher at the Colorado River would also avoid impacts on the Yuma clapper rail at the Colorado River.

Disturbance of wetlands and drains during Project construction would reduce available foraging and nesting habitat for the species. The reduction in this habitat type could reduce the ability of the area to support clapper rails or affect the overall suitability of habitat in the region. However, impacts on wetland and drain habitat would be temporary because these vegetation communities typically revegetate within 1 year following construction. As a result of the Agency Staffs' recommendations and given that impacts on Yuma clapper rail habitat would be minor and temporary, the proposed Project *is not likely to adversely affect* the species.

4.7.4.3 Desert Tortoise

The desert tortoise, a federally and California-listed threatened species, is widely distributed throughout the Mojave and Colorado deserts from below sea level to elevations of about 4,130 feet or higher. It is most common in desert scrub, desert wash, and Joshua tree habitats, but occurs in almost every desert habitat except on the most precipitous slopes. Highest tortoise densities are found in creosote bush communities with extensive annual wildflower blooms. This species requires friable soil for burrow and nest construction, but does not occupy areas of blown sand or very sandy soils due to burrow collapse.

The BLM's CDCA Plan, completed in 1980, has been amended by the NECO Plan. The NECO planning area is in the southeastern CDCA, primarily in the Sonoran Desert, and provides a landscape approach to managing desert ecosystems. The CDCA includes a system of large DWMAs for the desert tortoise. Specific DWMA prescriptions include standardization of BLM management classes, tortoise categories, and critical habitat; 5:1 ratio for surface disturbance compensation; and an overall 1 percent disturbance limit for any development within a DWMA.

The North Baja Pipeline Expansion Project would be outside the designated DWMAs. All of the land defined in BLM records as tortoise habitat that would be crossed by the proposed pipeline and lateral routes was previously defined as Category II lands, which recognize that the desert tortoise habitat is of lesser quality than that classified as Category I lands (most of which were incorporated into a DWMA). All categories of desert tortoise habitat outside the DWMAs were defined under the NECO Plan to be Category III for the purposes of compensation for disturbance, and have been assigned a compensation ratio of 1:1.

In the vicinity of the proposed B-Line, the creosote bush scrub habitats east of the Mule Mountains extending south to Interstate 8 (MPs 16.0 to 75.2) are potentially suitable habitat for the desert tortoise. A portion of this, MPs 34.0 to 58.4, is part of the Chuckwalla Unit, an area designated by the FWS as critical habitat for the desert tortoise. The Chuckwalla Unit includes privately owned land as well as land managed by the BLM.

Surveys for desert tortoise were conducted along the A-Line in 2001 and for the proposed B-Line between April 18 and April 27, 2005. The purpose of the surveys was to determine the number and

location of desert tortoise sign, including live and dead tortoise, burrows, scat, and tracks. Although one potential tortoise burrow was found in Riverside County at MP 11.8 in 2001, tortoise sign reliably associated with active tortoise use was noted only along the proposed B-Line route from MPs 17.0 to 69.0. In general, tortoise sign found in the 2001 survey, tortoise encounters documented during construction in 2002, and tortoise sign found in 2005 were closely correlated. The highest density of tortoise sign was found between MPs 41.0 and 67.0, with very high concentrations in the area of Indian Wash between MPs 62.5 and 65.5.

Construction of the B-Line would impact a total of 832 acres of desert tortoise habitat; however, only 237 acres would be new disturbance and 595 acres would overlap the previously disturbed (and compensated for) A-Line construction right-of-way. A total of 358 acres of critical habitat would be impacted, of which 106 acres would be new disturbance. The FWS has stated that only new disturbance would require compensation (Robleck 2005). The primary impact on critical habitat would occur during the construction phase of the Project. During construction, critical habitat would be temporarily disturbed at work areas, temporary access roads, and along the construction right-of-way. Although these areas would be restored and not used again during routine operation or maintenance, recovery in the arid climate is expected to take more than 10 years. Through desert tortoise critical habitat, the B-Line would be immediately adjacent to the existing A-Line, as well as portions of Stallard Road, SR 78, and Ogilby Road, which would minimize habitat fragmentation. The proposed Project would use existing access roads to the extent practicable with new access road construction limited to 0.25 mile as permanent access to the Blythe Meter Station. Thus, while the area of the right-of-way is within critical habitat, North Baja would limit disturbance of previously unaffected areas to the narrowest extent practicable. The proposed Project would not cross public lands within the DWMA that are managed for the conservation of the desert tortoise.

To compensate for the loss of desert tortoise habitat not previously compensated for during construction of the A-Line, North Baja would implement the following measures:

- Compensation rates for new impacts on desert tortoise habitat of 1:1 would be calculated and an assessed financial contribution would be paid to the BLM. In accordance with accepted guidelines previously implemented by the FERC, the FWS, and the BLM, areas of new impacts would include only those areas not previously affected by construction of the A-Line.

- North Baja would provide funding to the CDFG to manage acquired lands in addition to an enhancement fee based on the same compensation rate, which would be based on the CDFG published or calculated rates per acre at the time of issuance of the final EIS/EIR for the proposed Project.

In addition to the loss of potential desert tortoise habitat, construction-related impacts on the desert tortoise could include direct mortality or injury as a result of being crushed by vehicles, movement of soils, and entrapment in burrows and open trenches. North Baja would minimize the potential for impacts on the desert tortoise by implementing the following measures:

- North Baja would submit the names, permit numbers, and relevant tortoise experience resumes of all individuals who might need to handle desert tortoises to the FWS for approval at least 15 days before the initiation of clearance surveys. North Baja would also submit the list to the BLM for its records. Project activities would not begin until an authorized biologist has been approved. Although other biologists may be employed as biological monitors, only those approved by the FWS as authorized biologists would be permitted to handle tortoises.

- All persons authorized by the FWS to handle desert tortoises would follow the guidelines established in the *Guidelines for Handling Desert Tortoises During Construction Projects* (Desert Tortoise Council 1999).

- A clearance survey for the desert tortoise would be conducted by an authorized biologist within 24 hours before ground disturbance.

- Burrows outside of the limits of the construction right-of-way would be flagged so that the biological monitor would be able to more easily locate them during construction.

- All desert tortoise burrows or pallets in the construction area would be excavated by an authorized biologist. All desert tortoise handling and burrow excavation would be in accordance with the handling procedures developed by the FWS and would be conducted by authorized biologists.

- Desert tortoises that are found above ground and need to be moved from potential harm would be placed in the shade of a shrub by the authorized biologist. All desert tortoises removed from burrows would be placed in an unoccupied burrow of approximately the same size as the one from which it was removed.

- If an existing burrow is unavailable, the authorized biologist would construct or direct the construction of a burrow of similar size, shape, depth, and orientation as the original burrow. Desert tortoises moved during inactive periods would be monitored for at least 2 days after placement in the new burrows to ensure their safety. The authorized biologist would be allowed some judgment and discretion to ensure that the survival of the desert tortoise is likely.

- Should a tortoise wander into the construction area during construction, adjacent activities would be halted until the tortoise is moved out of the construction work area and out of harm's way.

- North Baja would install exclusion fencing along the right-of-way in areas where tortoise density is sufficiently high to warrant fencing, in the opinion of the authorized biologist in charge of tortoise surveys and in consultation with the FWS and the CDFG, to prevent tortoises from entering the construction work area and getting in harm's way.

- A worker bonus program would be implemented that would reward construction staff who spot a tortoise within the construction work area and, without touching or disturbing the animal, notify the authorized biologist for action.

- If a tortoise is located in the construction work area and is not moving, adjacent activities would be halted until an authorized biologist is able to move it out of harm's way.

- All pipeline marker signs within desert tortoise habitat would be fitted with "bird-be-gone" or similar bird repellent devices.

- Only approved access roads would be used. Only approved areas would be used for temporary storage areas, laydown sites, and any other surface-disturbing activities. Any routes of travel that require construction or modification, or any additional work areas, would be surveyed for tortoises by an authorized biologist(s) before modification or construction of the route or construction or use of a new work area.

- Trench segments or other excavations would be provided with tortoise escape ramps at 1-mile intervals. All excavations would be inspected for tortoises three times daily and before backfilling.

- Any time a vehicle is parked, the ground around and under the vehicle would be inspected for desert tortoises before the vehicle is moved. If a desert tortoise is observed, it would be left to move on its own. If this does not occur within 15 minutes, an authorized biologist would remove and relocate the tortoise.

- Within desert tortoise habitat, construction pipe, culverts, or similar structures with a diameter of 3 inches or greater that are stored on the construction site for one or more nights would be inspected for tortoises before the material is moved, buried, or capped. As an alternative, all such structures may be capped before being stored on the construction site.

- All construction-related activities in desert tortoise habitat would be conducted between dawn and dusk.

Although these measures would substantially reduce impacts on the desert tortoise, the construction of the proposed Project *is likely to adversely affect* the desert tortoise and its critical habitat and, as such, impacts on this species would be considered significant. Therefore, approval of the Project would be subject to a Statement of Overriding Considerations under the CEQA. As part of the section 7 formal consultation process, the FWS included non-discretionary terms and conditions in the BO to ensure that the Project would not jeopardize the continued existence of the desert tortoise (see Appendix R). North Baja would not be authorized to make any irreversible or irretrievable commitments of resources that would foreclose formulation or implementation of any reasonable or prudent alternatives needed to avoid jeopardizing the continued existence of the species and adverse modification of its critical habitat.

4.7.4.4 Razorback Sucker

The razorback sucker is a federally and California-listed endangered fish species found only in large rivers of western North America's Colorado River basin (Mueller 2000). Both a riverine and lacustrine species, razorback suckers are found in low-velocity main channel backwaters or off-channel wetlands. This fish spawns in areas of sand, gravel, or rocks in shallow water.

The razorback sucker may occur along the proposed B-Line at the Colorado River crossing (MP 0.2). The razorback sucker is also known to occur throughout the Palo Verde Outfall Drain. The proposed B-Line route would parallel, but would not affect, the Palo Verde Outfall Drain from MPs 24.0 to 31.0.

The FWS has designated a portion of the Colorado River crossed by the B-Line as critical habitat for the species. As currently proposed, North Baja would install the pipeline under the Colorado River using the HDD method. Unlike a conventional open-cut crossing, an HDD crossing would not alter or remove streambed or streambank habitat, cause in-stream sedimentation, or interfere with fish movement. This method would avoid effects on the razorback sucker during the crossing of the Colorado River.

North Baja may withdraw water from sources hydrologically connected to the Colorado River for use in dust control activities and hydrostatic testing of the pipeline (see Section 4.3.3.4). Pursuant with its CM&R Plan, North Baja would screen intake piping to prevent fish and fish egg entrainment during hydrostatic test water withdrawals. In Section 4.3.4, the Agency Staffs have recommended that North

Baja file a revised Dust Control Plan that includes measures to prevent fish and fish egg entrainment during dust control water withdrawal.

It is possible that geologic irregularities could be encountered during the HDD crossing of the Colorado River that could result in the inadvertent release of drilling mud (frac-out) or the inability to complete the crossing using the HDD method. North Baja has prepared an HDD Plan (see Appendix G) that would minimize the adverse impact of a frac-out on aquatic resources. During construction of the A-Line, there were no frac-outs into the Colorado River and, based on geotechnical studies, none are expected to occur during the B-Line crossing of the river. Therefore, although the potential exists for the Project to affect the species in the event of a frac-out during the HDD crossing of the Colorado River, the potential for this to occur is low. Because of the low likelihood of a frac-out and the measures that would be implemented during water withdrawals from the Colorado River, the Agency Staffs have determined that construction of the proposed Project is *not likely to adversely affect* the razorback sucker or its critical habitat and, as such, impacts on this species would be less than significant.

4.7.4.5 Peirson's Milk-vetch

The Peirson's milk-vetch is a federally listed threatened and California-listed endangered plant found in southern California, Arizona, and Baja California. In California, the Peirson's milk-vetch occurs on sand dunes in the Algodones Dunes system of Imperial County. Historically, the plant was known from Borrego Valley in San Diego County and at a site southwest of the Salton Sea in Imperial County, but it has not been identified at those locations in recent years (Sawyer and Keeler-Wolf 1995). It is thought that the species responds positively to substrate disturbance, due in part to the redistribution of sandy substrate and nutrients to the ground surface.

Critical habitat for the Peirson's milk-vetch was designated by the FWS in 2004. Critical habitat in the Project area consists of Subunits A and B of the Algodones Dunes Critical Habitat Unit, which includes both Federal and private land. Subunit A is north of SR 78 and encompasses portions of the Mammoth and North Algodones Dunes Wilderness. Subunit B lies south of SR 78 and north of Interstate 8 and encompasses the Ogilby Management Area. The proposed Project does not cross Subunits A or B and, therefore, would be outside designated critical habitat.

North Baja conducted a focused survey for the portion of the proposed B-Line route south of the intersection with Interstate 8 (MPs 72.0 to 79.8) on May 14, 2005, and a supplemental survey on the west side of the right-of-way on September 4, 2005. Individuals and small populations of the Peirson's milk-vetch were found along the proposed B-Line route in areas of sandy substrate off the existing A-Line right-of-way, while the three larger populations (greater than 100 plants each) were found on the A-Line right-of-way. Plant populations varied in density, generally occurring as single plants or relatively isolated populations of several dozen plants. The survey extended up to 30 feet west of the existing right-of-way, but only one plant was seen west of the previously disturbed right-of-way, approximately 5 feet off of the existing right-of-way. The remainder of the plants occurred within the disturbed right-of-way.

North Baja did not conduct a focused survey for the Peirson's milk-vetch along the proposed IID Lateral. However, the BLM conducted an annual focused survey for the Peirson's milk-vetch in 2005 in the ISDRA, which included the area that would be crossed by the IID Lateral. The results of this survey showed populations of the Peirson's milk-vetch close to the proposed IID Lateral route between MPs 0.5 and 7.5. Therefore, the presence of the Peirson's milk-vetch is assumed between MPs 0.5 and 7.5 of the IID Lateral.

Although no Peirson's milk-vetch were identified during preconstruction monitoring for the A-Line, after the heavy rains of 2004 and 2005 large numbers of Peirson's milk-vetch were found in the

disturbed post-construction right-of-way. Based on the survey results of the proposed B-Line and existing A-Line rights-of-way, it appears that there is a substantial seed bank of Peirson's milk-vetch available that was not adversely affected by construction of the A-Line. Additionally, it appears as if the topsoil and seed bank conservation measures implemented during construction of the A-Line in 2002 successfully preserved and distributed Peirson's milk-vetch seeds and provided for the quick re-establishment of this species. North Baja would utilize the same techniques used during construction and restoration of the A-Line for the proposed B-Line, including topsoil segregation to conserve the existing seed bank, respreading of topsoil upon completion of construction, and imprinting the right-of-way during restoration with equipment (e.g., sheepsfoot roller) to provide micro-catchment areas for seed retention. Clearing could result in the loss of the current season's seed production depending on construction timing; however, Peirson's milk-vetch seed is able to remain viable for several years (FWS 2002b). Therefore, re-establishment would not be dependent upon construction occurring after a single season's seed-production period.

North Baja would similarly segregate topsoil along the IID Lateral, but would not use a sheepsfoot roller in the area of the dunes along the lateral because this equipment is ineffective in sand. Construction of the IID Lateral through potential Peirson's milk-vetch habitat would be conducted in the summer months after adult plants (if present) have already set seed, which should allow for the re-establishment in the next growing season after construction is completed.

Proposed mitigation measures, including topsoil segregation and timing of construction, would substantially reduce impacts on the Peirson's milk-vetch. Additionally, construction through previously undisturbed areas adjacent to the existing right-of-way could actually benefit the species by providing open areas for the species to develop. Nonetheless, the proposed Project would result in direct impacts on the species, including crushing and cutting of individuals and populations. Thus, although construction in locations adjacent to populations of this species may increase habitat suitability or otherwise make the area suitable for proliferation of the species, the likelihood of overall positive benefits is uncertain. The clearing and grading of areas currently containing individuals and populations of this species would result in direct and adverse impacts on existing populations. Therefore, the Agency Staffs believe that the North Baja Pipeline Expansion Project *is likely to adversely affect* the Peirson's milk-vetch and, as such, impacts on this species would be considered significant and approval of the Project would be subject to a Statement of Overriding Considerations under the CEQA. As part of the section 7 formal consultation process, the FWS concluded in the BO that the Project would not jeopardize the continued existence of the Peirson's milk-vetch (see Appendix R).

4.7.5 State-listed Threatened and Endangered Species

Based on consultations with the AGFD and the CDFG and a search of the CNDDB, 16 State-listed or proposed listed rare, threatened, or endangered species were identified as potentially occurring within the proposed Project area. The Agency Staffs have determined that due to lack of habitat, the proposed Project would not affect the bald eagle, the brown pelican, the elf owl, or the desert pupfish, and they have been eliminated from further consideration. Based on habitat evaluations and species-specific surveys, the Agency Staffs have determined that the North Baja Pipeline Expansion Project has the potential to affect the remaining 11 species. Five of these species are also federally listed (southwestern willow flycatcher, Yuma clapper rail, desert tortoise, razorback sucker, Peirson's milk-vetch) and are discussed in Section 4.7.4. The remaining six species are discussed below.

4.7.5.1 Arizona Bell's Vireo

The Arizona bell's vireo is a California-listed endangered bird that inhabits desert riparian communities where thickets of willow and other low shrubs are found along water and intermittent

streams. In California, the Arizona bell's vireo is limited in distribution to a few locations along the Colorado River.

Habitat evaluation surveys along the proposed B-Line identified potential habitat for this species at the Colorado River (MPs 0.0 to 3.0) and the Davis Lake area (MPs 31.0 to 33.0). As discussed previously, the use of the HDD method to cross the Colorado River and implementation of North Baja's general conservation measures would serve to avoid or minimize potential impact on areas adjacent to the Colorado River, including habitat for the Arizona bell's vireo. The proposed B-Line would cross no closer than 1,300 feet to Davis Lake between MPs 31.0 and 33.0 and, therefore, would not be considered a noise impact. In addition, riparian habitat would not be affected at this location. Therefore, construction of the pipeline would have no adverse effect on the Arizona Bell's vireo or its habitat. As such, the Project is not expected to reduce the overall abundance of the species in the area or cause a temporary loss or alteration of important habitat for the species. As a result, impacts on this species would be less than significant.

4.7.5.2 California Black Rail

The California black rail is a California-listed threatened species. This freshwater marsh bird requires mature stands of cattails and bulrushes for cover, and it can be found foraging in adjacent areas of shallow water and mudflats for crayfish, clams, and insects.

Preliminary habitat evaluations indicate that potential habitat for the California black rail is found in freshwater marshes, wetlands, and drains along the B-Line route near the Colorado River (MPs 0.0 to 3.0), the Palo Verde Valley (MPs 0.0 to 12.0), and the Davis Lake area (MPs 31.0 to 33.0). Habitat for this species may also occur near the Alamo River (MP 32.3) along the IID Lateral.

North Baja conducted a focused survey at each location of potential rail habitat along the A-Line in 2001 and along the proposed B-Line in May 2005. No California black rails were detected at any of the survey locations.

Because this species was not identified during surveys along the B-Line, no special mitigation measures are proposed besides North Baja's general conservation measures. However, areas of suitable habitat could become occupied prior to construction beginning in 2009, if the Project is approved. As recommended by the CDFG, North Baja has agreed to conduct preconstruction surveys for the California black rail if habitat for this species is not cleared before construction. Habitat for this species is similar to the Yuma clapper rail, previously discussed in Section 4.7.4.2. Per the Agency Staffs' recommendation for the Yuma clapper rail (see Section 4.7.4.2), suitable habitat for both the Yuma clapper rail and the California black rail at both Rannells Drain and the Alamo River would be cleared before construction. This measure would avoid direct impacts on the California black rail during construction of the B-Line.

Disturbance of wetlands and drains during Project construction would reduce available foraging and nesting habitat for the species. Impacts on wetland and drain habitat would be temporary because these vegetation communities typically revegetate within 1 year following construction. Given that no individuals were found to be using the areas along the proposed Project corridor during several recent surveys and that impacts on California black rail habitat would be minor and temporary, construction of the proposed Project would have no adverse effect on the California black rail and impacts on this species would be less than significant.

4.7.5.3 Gila Woodpecker

The Gila woodpecker is a California-listed endangered species. This species is common in Arizona, but is limited to a few scattered locations in the Colorado River Valley in California. The Gila woodpecker inhabits areas of desert riparian, mesquite, saguaro, or Joshua tree woodlands. It may sometimes be found in trees, palms, and even wooden utility poles in urban and suburban areas.

Before construction of the A-Line, 10 areas were identified as potential Gila woodpecker nesting habitat. These areas include the Colorado River crossing (MP 0.2) and areas at MPs 17.6, 21.8, 22.2 to 25.3 (Stallard Road Wash), MPs 35.6 to 36.4 (Milpitas Wash), MPs 46.4, 50.2 to 52.4, 55.5, 59.5, and 64.8 to 65.2 (Gold Rock Ranch). A focused survey and preconstruction surveys were conducted before construction of the A-Line in 2002.

The 2002 surveys identified two occupied cavities at MPs 50.7 and 51.7. One active nest cavity was identified in a power pole approximately 54 feet from the right-of-way. The other active nest cavity was located in a Palo Verde tree with a single male woodpecker within 16 feet of the right-of-way. The birds persisted during and after construction, and appeared unaffected by the pipeline installation process (Foster Wheeler Environmental Corporation [FWENC] 2002).

The CDFG recommended that North Baja conduct preconstruction surveys to determine the presence of the Gila woodpecker in the vicinity of the proposed B-Line in areas of suitable nesting habitat. North Baja has agreed to conduct surveys for Gila woodpeckers in areas of suitable nesting habitat before initiation of construction of the B-Line if construction is scheduled to occur during the breeding season. If active Gila woodpecker nest cavities are identified within 100 feet of the right-of-way during preconstruction surveys, North Baja would monitor cavities during construction to determine if nesting individuals are being disturbed by construction activities. If disturbance (e.g., avoidance of the cavity by individuals) is noted, and young are present in the cavity, North Baja would cease construction within 200 feet of the nest cavity until the young have fledged.

With implementation of North Baja's proposed surveys and conservation measures, if necessary, no direct adverse effect on the Gila woodpecker is expected from construction of the proposed B-Line. As a result, impacts on this species would be less than significant.

4.7.5.4 Western Yellow-billed Cuckoo

The western yellow-billed cuckoo is a California-listed endangered species and is also a candidate for Federal listing as endangered or threatened. This bird is an uncommon to rare summer resident of valley foothill and desert riparian habitats in scattered locations in California. Habitat loss has resulted in drastically reduced numbers of this species. Western yellow-billed cuckoos are most frequently found along perennial streams, wetlands, and other riparian areas with large stands of cottonwood and willow trees and an understory of mesquite, tamarisk, and cattail marshes.

Marginal habitat for the western yellow-billed cuckoo is present along some areas of the Colorado River near MP 0.2 of the proposed B-Line. North Baja's biologists conducted protocol surveys for this species before construction of the A-Line in June and July 2001. No individuals were identified during these surveys (FWENC 2002). Due to the highly degraded nature of the habitat in the Colorado River vicinity of the Project, this species is not expected to occur. Additionally, the Agency Staffs have determined that through implementation of North Baja's general conservation measures, the proposed Project would have no adverse effect on the western yellow-billed cuckoo. As such, Project-related impacts that would reduce the overall abundance of the species in the area or cause a temporary loss or

alteration of important habitat for the species are not expected. As a result, impacts on the western yellow-billed cuckoo would be less than significant.

4.7.5.5 Algodones Dune Sunflower

The Algodones Dune sunflower is a Federal species of concern, a California-listed endangered species, and is designated 1B (rare throughout all or portions of its range) by the CNPS. The Algodones Dune sunflower is a perennial herb found in partially stabilized desert dunes in the lee of prevailing winds in the southern Sonoran Desert in Imperial County and in southwestern Arizona and New Mexico. The species blooms from September to May, and is threatened primarily by OHV traffic (Skinner and Pavlik 1994, CDFG 2000).

Suitable habitat for this species is found along the IID Lateral route in the southern Algodones Dunes within the ISDRA (MPs 0.5 to 7.9). The IID Lateral would cross approximately 76 acres of Algodones Dune sunflower habitat in the ISDRA. In lieu of conducting species-specific surveys, North Baja has indicated that it is assuming that the species is present throughout the area of suitable habitat. North Baja would segregate topsoil along the IID Lateral, but would not use a sheepsfoot roller in the area of the dunes along the lateral because this equipment is ineffective in sand. Construction of the IID Lateral through potential Algodones Dune sunflower habitat would be conducted in the summer months after adult plants (if present) have already set seed, which should allow for the re-establishment in the next growing season after construction is completed. Although North Baja's general conservation measures would substantially reduce impact on this species, construction of the IID Lateral may result in the removal of individual plants. However, the reproduction potential of the local population would not be affected; therefore, construction of the IID Lateral would not have an adverse impact on the population of Algodones Dune sunflower. As a result, with the implementation of North Baja's general conservation measures, including the efforts to minimize the spread of non-native species, the Project is not expected to reduce the overall abundance of the species in the area or cause a temporary loss or alteration of important habitat for the species. Therefore, impacts on the Algodones Dune sunflower would be less than significant.

4.7.5.6 Wiggins's Croton

The Wiggins's croton is a California-listed rare plant species and is designated 2 (rare throughout all or portions of its range in California, but common beyond the boundaries of California) by the CNPS. This species occurs in the southeastern Sonoran Desert in southeastern Imperial County in California. It can be found on desert dunes and Sonoran desert scrub habitats, and is commonly associated with sand dunes and sandy arroyos. The Wiggins's croton blooms from March to May and is threatened by OHV traffic (Skinner and Pavlik 1994, CDFG 2000).

Suitable habitat for the Wiggins's croton is found along the IID Lateral route in the southern Algodones Dunes within the ISDRA (MPs 0.5 to 7.9). The IID Lateral would cross approximately 76 acres of Wiggins's croton habitat in the ISDRA. In lieu of conducting species-specific surveys, North Baja has indicated that it is assuming that the species is present throughout the area of suitable habitat. North Baja would segregate topsoil along the IID Lateral, but would not use a sheepsfoot roller in the area of the dunes along the lateral because this equipment is ineffective in sand. Construction of the IID Lateral through potential Wiggins's croton habitat would be conducted in the summer months after adult plants (if present) have already set seed, which should allow for the re-establishment in the next growing season after construction is completed. Although North Baja's general conservation measures would substantially reduce impact on this species, construction of the IID Lateral may result in the removal of individual plants. However, the reproduction potential of the local population would not be affected; therefore, construction of the IID Lateral would not have an adverse impact on the population of

Wiggins's croton. As a result, with the implementation of North Baja's general conservation measures, including the efforts to minimize the spread of non-native species, the Project is not expected to reduce the overall abundance of the species in the area or cause a temporary loss or alteration of important habitat for the species. Therefore, impacts on the Wiggins's croton would be less than significant.

4.7.6 Other Special Status Species

Based on consultations with the FWS, the BLM, the AGFD, and the CDFG and a search of the CNDDB, 35 special status species (i.e., those not federally or State-listed or proposed listed endangered or threatened) were identified as potentially occurring within the Project area. Based on habitat evaluations and species-specific surveys, the proposed Project has the potential to affect 16 of these species. A discussion of potential impacts and measures to avoid or minimize impacts on these species is presented below.

4.7.6.1 Colorado River Cotton Rat

The Colorado River cotton rat is a California species of special concern. This species is limited to the marshes of the Colorado River. The B-Line would cross the Colorado River and associated riparian areas at about MP 0.2 using the HDD method. This method would not require surface disturbance within the river or in the adjacent banks or wetlands. If a frac-out occurred during the HDD of the river, drilling mud could be released into areas adjacent to the river, and North Baja's efforts to contain the drilling mud could further affect potential habitat for the Colorado River cotton rat. However, successful HDDs of the Colorado River have been completed in the vicinity of the B-Line crossing and North Baja does not anticipate difficulties with the crossing for the proposed Project. The Agency Staffs anticipate that the proposed HDD is likely to be successful; therefore, the North Baja Pipeline Expansion Project is not expected to reduce the overall abundance of the species in the area, cause a temporary loss or alteration of important habitat for the species, or result in other direct or indirect impacts on the Colorado River cotton rat that could contribute to a trend towards Federal or State listing. As a result, impacts on the Colorado River cotton rat would be less than significant.

4.7.6.2 Desert Bighorn Sheep

The desert bighorn sheep is listed as a sensitive species by the BLM. Desert bighorn sheep usually occur in small herds of about 10 animals in open, rocky, steep areas with available water and herbaceous forage. The sheep generally have two distinct, separate ranges in summer and winter, with corresponding spring and fall migrations. The summer ranges for desert bighorn sheep are typically smaller than winter ranges due to the sheep's dependence on water sources in the summer. The BLM reported that the proposed Project could encounter desert bighorn sheep near the Palo Verde Wilderness Area, which is approximately 1 mile west of the B-Line near MP 31.0. As discussed in Section 4.6.2.4, the multi-species WHMA that would be crossed by the B-Line between approximate MPs 35.2 and 50.0 includes two corridor portions of proposed WHMAs for bighorn sheep between MPs 35.2 and 42.0 and MPs 49.0 and 50.0.

Impacts on desert bighorn sheep are likely to be indirect in nature, resulting from noise-related disturbance during construction. All construction activities would occur within the approved construction work area and North Baja would inform workers that bighorn sheep may occur in the area.

Based on the distance of the Project from the Palo Verde Wilderness Area and because desert bighorn sheep are highly mobile and wide ranging and would likely avoid construction activities, impacts on the desert bighorn sheep would be less than significant.

4.7.6.3 Brown-crested Flycatcher

The brown-crested flycatcher is a California species of special concern. It inhabits desert riparian habitat along the lower Colorado River and requires thickets, trees, snags, and shrubs for foraging and perching, as well as nesting cavities and appropriate cover (CDFG 2000). This species breeds from May through September along the Colorado River south to Yuma; however, excessive clearing of the riparian forest along the lower Colorado River south to Yuma has made this species a rare breeder in the area (Small 1994).

Suitable riparian and desert wash woodland habitat for the brown-crested flycatcher occurs along the proposed B-Line in the lower Colorado River basin between MPs 22.0 to 23.0, 35.0 to 36.0, 41.0 to 46.0, 50.0 to 53.0, and 59.0 to 66.0 (Konecny 2000). Clearing of suitable habitat during construction of the proposed Project during the breeding season could result in injury or death of adults and young, if still in the nest, or abandonment of nests if they are located near the right-of-way. North Baja currently proposes to complete construction of the B-Line after the breeding season. Per its general conservation measures, North Baja would preclear vegetation along the B-Line if the schedule was modified such that construction would be necessary during the breeding season, thereby preventing individuals from nesting in areas that would be disturbed during construction. Additionally, per the Agency Staffs' recommendation in Section 4.6.2.3, preconstruction clearing would be conducted in accordance with recommendations from the FWS, the BLM, and the CDFG. The minor, incremental loss of unoccupied habitat would not be expected to have direct or indirect impacts on individuals or reduce the abundance of brown-crested flycatchers in the area because the proposed Project would be adjacent to an existing cleared right-of-way. Thus, fragmentation of undisturbed suitable habitat would not occur. With implementation of North Baja's general mitigation measures, the North Baja Pipeline Expansion Project is not expected to reduce the abundance of or alter habitat important for the brown-crested flycatcher that could contribute to a trend towards Federal or State listing. As a result, impacts on this species would be less than significant.

4.7.6.4 Burrowing Owl

The burrowing owl is a California species of special concern and a BLM sensitive species. This species is found in parts of the western United States, and inhabits open, dry grasslands, deserts, agricultural areas, and scrublands with low-growing vegetation. Burrowing owls are subterranean nesters and are typically found using burrows made by small mammals, such as ground squirrels or badgers.

Burrowing owls are known to occur in the irrigated desert agricultural areas along the proposed B-Line and along the IID Lateral in the Imperial Valley, showing that burrowing owl populations have adapted to agricultural activities in these areas. The B-Line would cross suitable burrowing owl habitat from MPs 0.0 to 12.0 (which includes 18th Avenue), and the IID Lateral would cross suitable burrowing owl habitat from MPs 28.0 to 46.0. FERC staff observed several burrowing owls adjacent to the road shoulders along 18th Avenue in summer 2005. North Baja conducted a survey for special status species along the proposed Arrowhead Extension in the Spring of 2006. North Baja identified one probable burrowing owl burrow and an individual burrowing owl adjacent to a burrow at approximate MP 1.5. Burrowing owls are also occasionally seen in the open desert. One pair was noted south of Interstate 8 in an OHV area during construction of the A-Line in 2002.

A primary component of North Baja's impact minimization efforts would include identification of active burrows before construction. Owls occupying burrows within 250 feet of the construction work area would be left alone and monitored or passively or actively relocated to appropriate and previously installed artificial or available alternate natural burrows. Only biologists approved by the CDFG in advance would handle owls or install one-way doors during relocation activities. The management

strategy utilized would be determined on a case-by-case basis. In addition to relocation or monitoring efforts, North Baja would implement the following measures to minimize impacts on the burrowing owl:

- Direct impacts on burrowing owl habitat would be minimized by constructing in the road pavement or road shoulder in agricultural areas or by boring/drilling beneath habitat areas (e.g., canals and drains).

- Preconstruction surveys during the breeding season would be conducted by biologists who would visually check all potential habitat within 250 feet of both sides of the proposed construction work area within 1 week before construction.

- Unoccupied burrows discovered within the construction right-of-way during preconstruction surveys would be collapsed or excavated before construction activities to prevent occupancy by burrowing owls.

- Artificial burrows, installed to minimize the effect of burrow loss, would be placed within the home range of individual owls that would be affected before burrow excavation or installation of one-way doors.

In addition to these avoidance and minimization efforts, if any active burrows are damaged by construction activities, North Baja would provide compensation at the equivalency rate of 6.5 acres of foraging habitat for burrowing owls for each active burrow damaged.

North Baja has indicated that implementation of these measures through an adaptive management plan during construction of the A-Line effectively avoided or minimized impacts on burrowing owls. Although individual burrowing owls could be affected by construction activities, with implementation of North Baja's proposed measures, the Project is not expected to reduce the overall abundance of the species in the area, cause a temporary loss or alteration of important habitat for the species, or result in other direct or indirect impacts that could contribute to or result in Federal or State listing of the burrowing owl. As a result, impacts on this species would be less than significant.

4.7.6.5 Crissal Thrasher

The Crissal thrasher is a species of special concern in California. This migratory bird species is generally intolerant of human disturbance and occurs in the southwestern deserts of the United States, including along the lower Colorado River in California. This species inhabits brushy thickets or dense understories of desert riparian and desert wash habitats. Loose soils (not too firm or sandy) suitable for digging up insect prey are a strong habitat indicator for this species.

Potential habitat for the Crissal thrasher occurs along the B-Line near the Colorado River and the town of Blythe (MPs 0.0 to 3.0), the town of Palo Verde (MPs 24.0 to 29.0), and the Davis Lake area (MPs 31.0 to 33.0). One individual was observed near the pipeline route along 18th Avenue in Blythe during construction of the A-Line in 2002. Additionally, a Crissal thrasher was reported in the area of Stallard Road (MP 25.0) during the southwestern willow flycatcher surveys in 2005. No potential habitat for the Crissal thrasher was identified along the Arrowhead Extension or the IID Lateral.

Because habitat for this species would recover slowly after construction, any impacts would result in a long-term reduction of available habitat. If Crissal thrashers are present during the breeding season (early February to June), the noise from construction could indirectly affect these birds. Birds disturbed by construction of the proposed Project would most likely be displaced into adjacent habitats, potentially disrupting breeding activities and annual production for one season. North Baja currently proposes to

complete construction of the B-Line after the breeding season. Per its general conservation measures, North Baja would preclear vegetation along the B-Line if the schedule was modified such that construction would be necessary during the breeding season, thereby preventing individuals from nesting in areas that would be disturbed during construction. Additionally, per the Agency Staffs' recommendation in Section 4.6.2.3, preconstruction clearing would be conducted in accordance with recommendations from the FWS, the BLM, and the CDFG. The minor, incremental loss of unoccupied habitat would not be expected to have direct or indirect impacts on individuals or reduce the abundance of the Crissal thrasher in the area because the proposed Project would be adjacent to an existing cleared right-of-way. Thus, fragmentation of undisturbed suitable habitat would not occur.

Further, North Baja would minimize the potential for long-term impacts on the Crissal thrasher by compensating for loss of microphyll woodland habitat through payment of an assessed financial contribution at a ratio approved by the FWS, the BLM, and the CDFG for those areas not already covered by desert tortoise habitat compensation.

With the implementation of North Baja's conservation measures and compensatory mitigation proposal, the Project is not expected to reduce the overall abundance of the species in the area, cause a temporary loss or alteration of important habitat for the species, or result in other direct or indirect impacts that could contribute to or result in Federal or State listing of the Crissal thrasher. As a result, impacts on this species would be less than significant.

4.7.6.6 Ferruginous Hawk

The ferruginous hawk is a California species of special concern. This hawk is a migratory, non-breeding winter resident of California from September through April. Ferruginous hawks prefer open grasslands, desert scrub, and low foothills surrounding valleys where they hunt for small mammals, birds, reptiles, and amphibians. They are considered uncommon migrants in the Colorado River area and in grasslands and agricultural areas in southern California.

The ferruginous hawk is an occasional migrant within the Project area. Construction of the proposed Project would have no impact on this species.

4.7.6.7 Le Conte's Thrasher

The Le Conte's thrasher is a migratory California species of special concern and a BLM sensitive species. This species lives mainly in the lowest, most barren and hottest desert plains of southwestern and western Arizona and southeastern California. The Le Conte's thrasher occupies desert scrub, open washes, and Joshua tree habitats.

Potential habitat for the Le Conte's thrasher occurs along the proposed B-Line from MPs 12.0 to 79.8. This species may also be present along the proposed IID Lateral in the scattered creosote bush scrub habitat between the ISDRA and the Imperial Valley from MPs 8.0 to 28.0. In lieu of conducting species-specific surveys, North Baja has indicated that it is assuming that the species is present throughout the area of suitable habitat.

Because the habitat for this species would recover slowly after construction, any impacts would result in a long-term reduction of available habitat. If Le Conte's thrashers are present during the breeding season (early February to June), the noise from construction could indirectly affect these birds. Birds disturbed by construction of the proposed Project would most likely be displaced into adjacent habitats, potentially disrupting breeding activities and annual production for one season. However, North Baja currently proposes to complete construction of the B-Line after the breeding season. Per its general

conservation measures, North Baja would preclear vegetation along the B-Line if the schedule was modified such that construction would be necessary during the breeding season, thereby preventing individuals from nesting in areas that would be disturbed during construction. Additionally, per the Agency Staffs' recommendation in Section 4.6.2.3, preconstruction clearing would be conducted in accordance with recommendations from the FWS, the BLM, and the CDFG. The minor, incremental loss of unoccupied habitat would not be expected to have direct or indirect impacts on individuals or reduce the abundance of the Le Conte's thrasher in the area because the proposed Project would be adjacent to an existing cleared right-of-way. Thus, fragmentation of undisturbed suitable habitat would not occur.

Further, North Baja would minimize the potential for long-term impacts on the Le Conte's thrasher by compensating for loss of microphyll woodland habitat through payment of an assessed financial contribution at a ratio approved by the FWS, the BLM, and the CDFG for those areas not already covered by desert tortoise habitat compensation.

With the implementation of North Baja's general conservation measures and compensatory mitigation proposal, the Project is not expected to reduce the overall abundance of the species in the area, cause a temporary loss or alteration of important habitat for the species, or result in other direct or indirect impacts that could contribute to or result in Federal or State listing of the Le Conte's thrasher. As a result, impacts on this species would be less than significant.

4.7.6.8 Summer Tanager

The summer tanager is a California species of special concern that has historically utilized southern California as a major breeding area along the lower Colorado River and the Imperial Valley. This species is a rare fall and winter visitor and a late spring transient (Small 1994). The summer tanager inhabits desert riparian habitat along the lower Colorado River and requires cottonwood-willow riparian areas for nesting and foraging (CDFG 2000). Deforestation along the lower Colorado River has destroyed much of the available habitat, and the population has been much reduced (Small 1994).

Suitable habitat for the summer tanager is present along the proposed B-Line along the lower Colorado River basin (MPs 22.0 to 23.0, 35.0 to 36.0, 41.0 to 46.0, 50.0 to 53.0, and 59.0 to 66.0) (Konecny 2000). Because habitat for this species would recover slowly after construction, any impacts would result in a long-term reduction of available habitat. If summer tanagers are present during the breeding season (early February to June), the noise from construction could indirectly affect these birds. Birds disturbed by construction of the proposed Project would most likely be displaced into adjacent habitats, potentially disrupting breeding activities and annual production for one season. However, North Baja currently proposes to complete construction of the B-Line after the breeding season. Per its general conservation measures, North Baja would preclear vegetation along the B-Line if the schedule was modified such that construction would be necessary during the breeding season, thereby preventing individuals from nesting in areas that would be disturbed during construction. Additionally, per the Agency Staffs' recommendation in Section 4.6.2.3, preconstruction clearing would be conducted in accordance with recommendations from the FWS, the BLM, and the CDFG. The minor, incremental loss of unoccupied habitat would not be expected to have direct or indirect impacts on individuals or reduce the abundance of the summer tanager in the area because the proposed Project would be adjacent to an existing cleared right-of-way. Thus, fragmentation of undisturbed suitable habitat would not occur.

With the implementation of North Baja's general conservation measures, Project-related impacts that would reduce the overall abundance of the species in the area, cause a temporary loss or alteration of important habitat for the species, or result in other direct or indirect impacts that could contribute to or result in Federal or State listing of the summer tanager are not expected. As a result, impacts on this species would be less than significant.

4.7.6.9 Vermilion Flycatcher

The vermilion flycatcher is a species of special concern in California, and is a common and widespread breeder along the lower Colorado River and in the Coachella and Imperial Valleys. The vermilion flycatcher occurs in desert riparian habitat adjacent to irrigated fields, irrigation ditches, pastures, and other open mesic sites.

Suitable habitat for the vermilion flycatcher occurs along the proposed B-Line in the desert riparian areas of the lower Colorado River basin (MPs 0.0 to 12.0, 22.0 to 29.0, 31.0 to 33.0, 35.0 to 53.0, 59.0 to 66.0, and 79.0 to 79.8). The vermilion flycatcher is not known to occur in the area of the proposed Arrowhead Extension or the IID Lateral. Because habitat for this species would recover slowly after construction, any impacts would result in a long-term reduction of available habitat. If vermillion flycatchers are present during the breeding season (early February to June), the noise from construction could indirectly affect these birds. Birds disturbed by construction of the proposed Project would most likely be displaced into adjacent habitats, potentially disrupting breeding activities and annual production for one season. However, North Baja currently proposes to complete construction of the B-Line after the breeding season. Per its general conservation measures, North Baja would preclear vegetation along the B-Line if the schedule was modified such that construction would be necessary during the breeding season, thereby preventing individuals from nesting in areas that would be disturbed during construction. Additionally, per the Agency Staffs' recommendation in Section 4.6.2.3, preconstruction clearing would be conducted in accordance with recommendations from the FWS, the BLM, and the CDFG. The minor, incremental loss of unoccupied habitat would not be expected to have direct or indirect impacts on individuals or reduce the abundance of the vermillion flycatcher in the area because the proposed Project would be adjacent to an existing cleared right-of-way. Thus, fragmentation of undisturbed suitable habitat would not occur.

Potential habitat for the vermilion flycatcher at the B-Line Colorado River crossing location is substantially degraded. Additionally, the use of the HDD method to install the pipeline beneath the river would serve to avoid impacts on this already degraded habitat. The implementation of the HDD method in addition to North Baja's general conservation measures would serve to substantially reduce the potential impacts of the Project on the vermilion flycatcher. As such, Project-related impacts that would reduce the overall abundance of the species in the area, cause a temporary loss or alteration of important habitat for the species, or result in other direct or indirect impacts that could contribute to or result in Federal or State listing of the vermillion flycatcher are not expected. As a result, impacts on this species would be less than significant.

4.7.6.10 Yellow-breasted Chat

The yellow-breasted chat is a California species of special concern. This species is a fairly common breeder and is local to the lower Colorado River extending south to Yuma (Small 1994). The yellow-breasted chat inhabits riparian thickets of willow and other bushy tangles near watercourses (CDFG 2000). Widespread habitat deterioration and elimination, coupled with brood parasitism by brown-headed cowbirds, has diminished its status to an uncommon spring migrant from early-April to mid-May.

Suitable habitat for the yellow-breasted chat was identified along the proposed B-Line along the Colorado River in Blythe (MPs 0.0 to 3.0), the town of Palo Verde (MPs 22.0 to 23.0), and the Davis Lake area (MPs 31.0 to 33.0) (Konecny 2000). There is no suitable habitat for this species along the proposed Arrowhead Extension or the IID Lateral. Because habitat for this species would recover slowly after construction, any impacts would result in a long-term reduction of available habitat. If yellow-breasted chats are present during the breeding season (early February to June), the noise from

construction could indirectly affect these birds. Birds disturbed by construction of the proposed Project would most likely be displaced into adjacent habitats, potentially disrupting breeding activities and annual production for one season. However, North Baja currently proposes to complete construction of the B-Line after the breeding season. Per its general conservation measures, North Baja would preclear vegetation along the B-Line if the schedule was modified such that construction would be necessary during the breeding season, thereby preventing individuals from nesting in areas that would be disturbed during construction. Additionally, per the Agency Staffs' recommendation in Section 4.6.2.3, preconstruction clearing would be conducted in accordance with recommendations from the FWS, the BLM, and the CDFG. The minor, incremental loss of unoccupied habitat would not be expected to have direct or indirect impacts on individuals or reduce the abundance of the yellow-breasted chat in the area because the proposed Project would be adjacent to an existing cleared right-of-way. Thus, fragmentation of undisturbed suitable habitat would not occur.

With the implementation of North Baja's general conservation measures, Project-related impacts that would reduce the overall abundance of the species in the area, cause a temporary loss or alteration of important habitat for the species, or result in other direct or indirect impacts that could contribute to or result in Federal or State listing of the yellow-breasted chat are not expected. As a result, impacts on this species would be less than significant.

4.7.6.11 Colorado River Toad

The Colorado River toad, also called the Sonoran Desert toad, is a California species of special concern. This species is closely associated with permanent or semi-permanent water sources, usually flowing water, and was historically present in California along the channel of the lower Colorado River and in the southern Imperial Valley. These toads are documented to occur up the Colorado River from Fort Yuma to the Blythe-Ehrenberg area. Severe habitat alteration in the lower Colorado River region has impacted this species.

The proposed B-Line would cross the Colorado River and associated riparian areas at about MP 0.2 using the HDD method. This method would not require surface disturbance within the river or in the adjacent banks or wetlands. If a frac-out occurred during the HDD of the river, drilling mud could be released into areas adjacent to the river and North Baja's efforts to contain those drilling mud could further affect potential habitat for the Colorado River toad. However, successful HDDs of the Colorado River have been completed in the vicinity of the B-Line crossing and North Baja does not anticipate difficulties with the crossing for the proposed Project. The Agency Staffs agree that the proposed HDD crossing is likely to be successful; therefore, the North Baja Pipeline Expansion Project is not expected to reduce the abundance of the species in the area, cause a temporary loss or alteration of important habitat for the species, or result in other direct or indirect impacts on the Colorado River toad that could contribute to a trend towards Federal or State listing. As a result, impacts on this species would be less than significant.

4.7.6.12 Couch's Spadefoot Toad

The Couch's spadefoot toad is a California species of special concern that can be found in a variety of vegetation types, including desert dry wash woodland, creosote bush scrub, and alkali sink scrub. This species is adapted to an arid environment and spends up to 11 months a year in underground burrows surviving off stored fat reserves. During wet conditions, spadefoot toads breed in temporary rain pools or temporary overflow areas.

The CDFG has indicated that a population of spadefoot toads is historically known to occur along one of the dry washes crossed by the proposed B-Line (the Milpitas Wash [MP 35.3]). Additionally, one

Couch's spadefoot toad was found during construction of the A-Line in the Stallard Road wash area (MP 25.0) in 2002 (North Baja 2002). There are no recorded occurrences of this species in the CNDDB database quadrangles of the IID Lateral.

Construction of the proposed Project in areas of occupied habitat could result in mortality or injury to individual Couch's spadefoot toads due to entrapment in open trenches or as a result of being crushed by vehicles and displaced soil. Construction disturbances to rain pools or temporary overflow areas could disrupt breeding activities and annual production for one season, which could potentially significantly affect local populations of Couch's spadefoot toad.

To minimize impacts on individuals and populations of the Couch's spadefoot toad, North Baja has proposed the following mitigation measures:

- If local thunderstorms occur in the habitat identified by the CDFG and provide substantial moisture under warm conditions (temperatures over 90 °F) in July, August, or September, and if construction has not already been completed in that area, North Baja biologists would examine potential Couch's spadefoot toad habitat for persistent pools. The CDFG would notify North Baja if appropriate conditions prevail, and North Baja would coordinate with the CDFG to complete the surveys.

- Authorized biologists would monitor temporary pools for persistence and would examine them daily for eggs, tadpoles, or toadlets.

- Construction activities would not be conducted within 150 feet of temporary pools. If water fails to persist within shallow pools for 10 days, or if no Couch's spadefoot toad eggs, tadpoles, or toadlets are found within 10 days, then construction would resume in the area.

- If any Couch's spadefoot toads are found, the CDFG would be immediately notified. A report on the findings would be submitted to the CDFG within 30 days of completion of the construction activities within the area.

With implementation of North Baja's general conservation measures as well as the specific measures detailed above, Project-related impacts that would reduce the overall abundance of the species in the area, cause a temporary loss or alteration of important habitat for the species, or result in other direct or indirect impacts that could contribute to or result in Federal or State listing of the Couch's spadefoot toads are not expected. As a result, impacts on this species would be less than significant.

4.7.6.13 Flat-tailed Horned Lizard

The flat-tailed horned lizard is a California species of special concern and a BLM sensitive species. The proposal to list the flat-tailed horned lizard as a federally threatened species under the ESA was withdrawn by the FWS on June 20, 2006 (Federal Register 71:36745). The range of the flat-tailed horned lizard includes the Salton Sea and the Imperial Sand Dunes of California, as well as the low deserts of southwestern Arizona, northern Baja California, and the northwestern Sonoran Desert. This species is most abundant in areas of creosote bush, but may also be found in desert scrub, desert wash, succulent scrub, and alkali scrub habitats. Vegetation is usually scant in occupied areas, consisting of creosote bush or other scrubby growth. The present range of this species, and abundance in that range, has been greatly reduced over recent years by human activities such as development and recreational use of prime habitat.

Suitable habitat for the flat-tailed horned lizard occurs along the proposed B-Line route from Ogilby extending south to the All-American Canal (MPs 71.0 to 79.8). North Baja's biologists conducted surveys in the suitable habitat area in 2001 and categorized habitats as favorable (0.4 mile), transitional (4.1 miles), or unfavorable (4.3 miles) according to the *Flat-tailed Horned Lizard Range Management Strategy* (FTHLICC 2003). Flat-tailed horned lizards were observed between MPs 77.0 and 78.0 during surveys in 2000 and 2001, and were abundant between MPs 75.2 and 79.6 during construction of the A-Line. They are assumed to still be present in that area and are expected to occur in the same general locations during construction of the B-Line.

Suitable habitat for the flat-tailed horned lizard is present along the IID Lateral from MPs 8.0 to 28.0, and the presence of the flat-tailed horned lizard is assumed within this milepost range. The IID Lateral would be adjacent to the East Mesa Management Area, which is set aside primarily for protection of flat-tailed horned lizard habitat (BLM 2004). However, the *Flat-tailed Horned Lizard Range Management Strategy, Revision 2003* specifies that areas within the road right-of-way of Evan Hughes Highway are not considered flat-tailed horned lizard habitat, and that the management area stops at the north edge of the road right-of-way (FTHLICC 2003). The IID Lateral would be entirely within the road right-of-way and, in some places, would be in the road shoulder. From MPs 13.6 to 16.2, the IID Lateral would be north of the existing transmission lines within the road right-of-way. A total of 25.2 acres of suitable flat-tailed horned lizard habitat would be disturbed during construction of the IID Lateral.

Construction of the pipeline through habitat occupied by the flat-tailed horned lizard could result in direct mortality or injury of individual lizards as a result of being crushed by vehicles, movement of soil, and entrapment in open trenches. If construction occurs during extremely hot summer months, lizards can die if entrapped in open trenches. Ten lizards were known to have died and 15 were successfully relocated during construction of the A-Line in 2002. Construction noise and activity could also indirectly affect lizards by pushing them into similar adjacent habitat farther away from the construction work area; however, flat-tailed horned lizards would likely return to the habitat in the immediate vicinity of the right-of-way upon completion of construction activities.

Based on the experience gained during construction of the A-Line, North Baja would implement the following mitigation measures to reduce impacts on flat-tailed horned lizards during construction of the B-Line (MPs 75.2 to 79.6) and the IID Lateral (MPs 8.0 to 28.0):

- Authorized biologists would conduct preconstruction surveys to verify all flat-tailed horned lizard habitat in the construction area. Within 7 days before construction, biologists would identify habitat areas subject to direct construction-related ground disturbance.

- Biologists would conduct a final clearance survey 1 to 2 days before construction activities, which would include excavating potential burrows and relocating lizards to nearby suitable habitat. North Baja would implement the management strategy guidelines for relocation of flat-tailed horned lizards described in the *Flat-tailed Horned Lizard Range Management Strategy* (FTHLICC 2003).

- A field contact representative would initiate a worker education program and would have the authority to ensure compliance with protective measures for flat-tailed horned lizards.

- A biological monitor would be present in each area of active construction within flat-tailed horned lizard habitat throughout the work day from initial clearing through habitat restoration. The biological monitors would have sufficient education, field experience, and training with this species to understand its biology and behavior. The monitors

would ensure that all activities are in compliance with the management strategy guidelines for relocation of flat-tailed horned lizards. The biological monitors would also have the authority and responsibility to halt activities that are in violation of the management strategy guidelines.

- In areas of suitable habitat (MPs 75.2 to 79.6 of the B-Line and MPs 8.0 to 28.0 of the IID Lateral), North Baja would restrict the amount of trench open at any one time to 2 miles. Trench walkers would be employed in those areas such that each portion of open trench would be observed every 30 minutes when ground temperatures exceed 85°F (29.5 °C). Each trench walker can cover 2 miles per hour; therefore, the open portion of trench (2 miles) would require two trench walkers during hot weather to provide the desired coverage. Trench walkers would be construction workers with no other duties than to walk along the side of the open trench and look for flat-tailed horned lizards. These workers would receive specialized flat-tailed horned lizard training under the supervision of the BLM biologist and would be directly supervised by a qualified biologist who has also received flat-tailed horned lizard training. Additionally, all hazardous sites, such as open pipes, trenches, holes, or deep excavations would be inspected for the presence of lizards before backfilling.

- If lizards are found trapped in an excavation, the authorized biologist would capture by hand and relocate the affected lizard. The management strategy guidelines for relocation of flat-tailed horned lizards described in the *Flat-tailed Horned Lizard Range Management Strategy* (FTHLICC 2003) would be used.

The Agency Staffs recognize that individual lizards may be harmed or killed, reducing abundance of the species in the area, and that occupied habitat would be adversely impacted by construction. However, based on the mitigation measures described above (e.g., preconstruction clearance surveys, biological monitors present during construction, lizard relocation as necessary, restricted open trench lengths), the Project is not expected to reduce the overall population of the species in the area or result in other direct or indirect impacts that could contribute to or result in Federal or State listing of the flat-tailed horned lizard.

Nonetheless, based on impacts expected during construction of the proposed Project, including direct impacts temporarily lowering abundance of the species in the area, impacts on this species and its habitat would be considered significant. Therefore, approval of the Project would be subject to a Statement of Overriding Considerations under the CEQA.

4.7.6.14 Fairyduster

The fairyduster has been listed as a category 2 species (rare throughout all or portions of its range in California, but common beyond the boundaries of California) by the CNPS. This species is a deciduous shrub known to occur in Imperial and San Diego Counties in California, and is found in Sonoran Desert scrub, creosote bush scrub, and desert dry wash woodland habitats, as well as along desert washes (Skinner and Pavlik 1994).

North Baja's botanists surveyed the proposed B-Line route and identified fairyduster plants from a series of locations between MPs 45.1 to 49.8, 53.6 to 57.4, and 65.1 to 66.6. Marginal habitat for this species may occur along the IID Lateral. In lieu of conducting species-specific surveys, North Baja has indicated that it is assuming that the species is present throughout the area of suitable habitat along the IID Lateral.

Pipeline construction activities (e.g., clearing, grading, trenching, backfilling, excavation) would directly affect plants found within the construction work area. However, the loss of individual plants is not anticipated to affect the local or regional population of the species due to the relative abundance in the area. Construction would temporarily affect suitable habitat for the fairyduster. However, post-construction surveys of the A-Line right-of-way have shown that restoration of the pipeline right-of-way allows native plants to re-establish in areas disturbed by construction.

Although North Baja's general conservation measures, including topsoil segregation, would substantially reduce impact on this species, construction of the B-Line and the IID Lateral may result in the removal of individual plants. However, the reproduction potential of the local population would not be affected; therefore, construction of the B-Line and IID Lateral would not have an adverse impact on the population of fairyduster. As such, the Project is not expected to reduce the overall abundance of the species in the area, cause a temporary loss or alteration of important habitat for the species, or result in other direct or indirect impacts that could contribute to or result in Federal or State listing of the fairyduster. Therefore, impacts on this species would be less than significant.

4.7.6.15 Giant Spanish-needle

The giant Spanish-needle is a Federal species of concern, has been designated category 1B by the CNPS, and is a BLM sensitive species. This plant is an annual herb that occurs in the Sonoran Desert of southeastern Imperial County within active and stable sand dunes (Skinner and Pavlik 1994). The giant Spanish-needle blooms from February to May, and its main threat is OHV traffic (CDFG 2000).

Suitable habitat for the giant Spanish-needle is found along the IID Lateral in the southern Algodones Dunes within the ISDRA (MPs 0.5 to 7.9). In lieu of conducting species-specific surveys, North Baja has indicated that it is assuming that the species is present throughout the area of suitable habitat. Although the general mitigation measures, including topsoil segregation, would substantially reduce impact on this species, construction of the IID Lateral may result in the removal of individual plants. However, construction of the IID Lateral would not adversely impact the reproduction potential of the local population of the giant Spanish-needle. As a result, with the implementation of North Baja's general conservation measures, including the efforts to minimize the spread of non-native species, the Project is not expected to reduce the overall abundance of the species in the area, cause a temporary loss or alteration of important habitat for the species, or result in other direct or indirect impacts that could contribute to or result in Federal or State listing of the giant Spanish-needle. Therefore, impacts on this species would be less than significant.

4.7.6.16 Sand Food

The sand food is a category 1B species as designated by the CNPS. This plant is a perennial herb that occurs in the Sonoran Desert of southeastern Imperial County, western Arizona, and northwestern New Mexico (Skinner and Pavlik 1994), and occurs on the lee side of stabilized and partially stabilized desert dunes (CDFG 2000). The sand food blooms from April to June and is primarily threatened by OHV traffic and military activities (Skinner and Pavlik 1994).

Suitable habitat for the sand food is found along the proposed IID Lateral in the southern Algodones Dunes within the ISDRA (MPs 0.5 to 7.9). In lieu of conducting species-specific surveys, North Baja has indicated that it is assuming that the species is present throughout the area of suitable habitat. Although North Baja's general conservation measures, including topsoil segregation, would substantially reduce impact on this species, construction of the IID Lateral may result in the removal of individual plants. However, the reproduction potential of the local population would not be affected; therefore, construction of the IID Lateral would not adversely impact the population of the sand food. As

a result, with the implementation of North Baja's general conservation measures, including the efforts to minimize the spread of non-native species, the Project is not expected to reduce the overall abundance of the species in the area, cause a temporary loss or alteration of important habitat for the species, or result in other direct or indirect impacts that could contribute to or result in Federal or State listing of the sand food. Therefore, impacts on this species would be less than significant.

4.7.7 Cumulative, Interdependent, and Interrelated Effects

Section 7 of the ESA requires the Federal action agency to provide an analysis of cumulative effects when it requests initiation of formal consultation. Under the ESA, cumulative effects include the effects of future State, tribal, local, or private actions that are reasonably certain to occur in the action area. Future Federal actions that are unrelated to the proposed action are not considered because they would require a separate consultation pursuant to section 7 of the ESA.

Cumulative impacts can result from individually minor, but collectively significant, actions taking place over a period of time. Several other existing or planned activities in the general area of the proposed Project could have a cumulative impact with North Baja's proposed Project. Table 4.15-1 lists the projects that the Agency Staffs are aware of through the scoping process and additional research. In general, the projects listed that have the potential to impact wildlife and vegetation are those most likely to have a cumulative impact on special status species.

The geographic area considered in determining past, present, and reasonably foreseeable projects that could also have impacts on wildlife and vegetation includes the planning areas as designated by the BLM, the Palo Verde Valley, and the Imperial Valley. To determine non-Federal projects that are reasonably foreseeable, the Agency Staffs included those that have made formal proposals or engaged in a permitting process, and those that are included in agency plans or forecasts. A detailed discussion of projects considered for this cumulative impact analysis is included in Section 4.15.

When projects are constructed at the same time or are timed closely together, they could have a cumulative impact on vegetation and wildlife living in the area where the projects are built, even if the impacts are temporary. The removal of desert vegetation could have long-term consequences because the regeneration of vegetation in arid desert environments is slow. This effect is more severe in desert wash woodlands, which are less prevalent locally and provide more diverse wildlife habitat than creosote bush scrub. In addition to the proposed Project, the transmission line projects, the landfill, and the Mesquite Mine expansion would all adversely impact desert wash woodlands. Each of these projects is required to provide compensatory payments or land purchases equivalent to at least 3 acres for each acre disturbed. This, and the minimization of construction in desert wash woodlands, as required in each project by the terms of the section 1603 permit issued by the CDFG would reduce or mitigate the individual and cumulative impacts of these projects on desert wash woodlands. Further, none of the pipeline facilities would result in permanent impacts on vegetation or habitat, although regrowth would be slow.

The amount of desert wash woodland, desert dunes, and creosote bush scrub habitat that may be affected by these projects is relatively small compared to the abundance of habitat in the area. These projects would not fragment vegetation/habitat in addition to the fragmentation already existing due to the A-Line right-of-way, Interstate 8, the existing canal, and the existing recreation and Border Patrol access roads. All of the projects in California would involve mitigation measures designed to minimize the potential for long-term chronic erosion, increase the stabilization of site conditions, control the spread of noxious weeds, minimize the potential for accidental spills of materials into surface waters, and minimize the impact on special status species. This mitigation would minimize the degree and duration of the cumulative impacts of these projects.

4.7.8 Summary of Determinations of Effect for Federally Listed Species

Based on informal consultation with the FWS, 9 federally listed species were identified as potentially occurring in the general vicinity of (within the counties crossed by) the Project. After further consultations with the FWS, the BLM, and the CDFG, and completion of field surveys, a determination of effect for each of these species was developed. Two of the 9 species (desert tortoise and Peirson's milk-vetch) were identified as likely to be adversely affected by the proposed Project. Critical habitat for the desert tortoise was also identified as likely to be adversely affected. Table 4.7.8-1 provides a summary of the impact evaluation for federally listed species (and critical habitat, if present in the Project area) and for State-listed species with the potential to occur in the North Baja Pipeline Expansion Project area. Despite the potential for direct and indirect impacts of the proposed Project on listed species, the proposed Project would not restrict the range of endangered, rare, or threatened species.

In compliance with section 7 of the ESA, the Agency Staffs submitted the draft EIS/EIR to the FWS with a request for concurrence with the determinations of effect and to initiate formal consultation for the desert tortoise and the Peirson's milk-vetch. In a letter dated November 1, 2006, the FWS concurred with the determinations of effect. In the BO issued on April 20, 2007, the FWS concluded that the proposed action is not likely to jeopardize the continued existence of the desert tortoise and its critical habitat and the continued existence of the Peirson's milk-vetch.

TABLE 4.7.8-1

Summary of Assessment of Project Impacts on Listed Species

Species or Critical Habitat	Federal Status	State Status	Project Impact
Species listed under both Federal and California Endangered Species Acts			
Peirson's milk-vetch	Threatened	Endangered	May affect, likely to adversely affect
Razorback sucker	Endangered	Endangered	May affect, not likely to adversely affect
Razorback sucker critical habitat			May affect, not likely to adversely affect
Desert pupfish	Endangered	Endangered	No effect
Bonytail chub	Endangered	Rare	No effect
Desert tortoise	Threatened	Threatened	May affect, likely to adversely affect
Desert tortoise critical habitat			May affect, likely to adversely affect
Brown pelican	Threatened	Endangered	No effect
Bald eagle	Threatened	Endangered	No effect
Southwestern willow flycatcher	Endangered	Endangered	May affect, not likely to adversely affect
Yuma clapper rail	Endangered	Threatened	May affect, not likely to adversely affect
Species listed only under the California Endangered Species Act			
Algodones Dune sunflower		Endangered	May affect individuals, unlikely to adversely affect population
Wiggins's croton		Rare	May affect individuals, unlikely to adversely affect population
Arizona Bell's vireo		Endangered	No adverse effect
Western yellow-billed cuckoo	Candidate	Endangered	No adverse effect
Elf owl		Endangered	No effect
California black rail		Threatened	No adverse effect
Gila woodpecker		Endangered	No adverse effect

As required by the CESA, consultation has occurred with the CDFG to determine the proposed Project's effect on California-listed species. As described above, it is expected that the North Baja Pipeline Expansion Project would avoid adverse impacts on individuals or populations of the following California-listed threatened or endangered species: razorback sucker, desert pupfish, brown pelican, bald eagle, southwestern willow flycatcher, Yuma clapper rail, Algodones dune sunflower, Arizona bell's

vireo, western yellow-billed cuckoo, elf owl, California black rail, and Gila woodpecker. However, the Federal and California-listed threatened desert tortoise and the federally listed threatened and California-listed endangered Peirson's milk-vetch would likely be adversely affected by construction of the Project. Because these species are California-listed as well as federally listed, the CDFG would review the BO prepared by the FWS and consider the issuance of a consistency determination pursuant to section 2080.1 of the California Fish and Game Code. Alternatively, the CDFG may issue an Incidental Take Permit under section 2081 of the California Fish and Game Code. Additionally, approval of the Project would require the CSLC to prepare a Statement of Overriding Considerations under the CEQA if, after mitigation is applied, the CSLC finds that the impacts of the Project would not be reduced to a level that is less than significant.

Because the CDFG has not yet issued its conclusions regarding the impact of the Project on California-listed species, **the Agency Staffs recommend that:**

- **North Baja shall not begin Phase I-A or Phase II construction activities <u>until</u>:**

  a. the CDFG makes a consistency determination on the FWS' BO pursuant to section 2080.1 of the California Fish and Game Code or issues an Incidental Take Permit that covers both federally and State-listed species that may be affected;

  b. North Baja obtains an Incidental Take Permit under section 2081 of the California Fish and Game Code for all State-listed species that may be affected, or receives concurrence from the CDFG that an Incidental Take Permit is not required; and

  c. North Baja has received written notification from the Executive Officer of the CSLC that construction or use of conservation measures may begin.

Construction of the proposed Project is currently scheduled to be completed in three phases, with construction of the last phase beginning in late summer of 2009. Due to the potential inhabitation of suitable habitats found to be lacking individuals during surveys in 2005, and the potential for new species to become listed under State or Federal law in the future, **the Agency Staffs recommend that:**

- **For those portions of the Project facilities where construction would occur more than 1 year from the date of issuance of the FERC and CSLC approvals for the Project, North Baja shall consult with the FWS, the BLM, and the CDFG to update the species list and to verify that previous consultations and determinations of effect are still current. Documentation of these consultations, and the need for additional surveys and survey reports (if required), and FWS, BLM, and CDFG comments on the surveys and survey reports and their conclusions (as applicable), shall be filed with the FERC and the CSLC <u>before construction begins on those facilities</u>.**

4.7.9 No Project Alternative

Under the No Project Alternative, the FERC would deny North Baja's application for a Certificate and a Presidential Permit amendment, the CSLC would deny North Baja's application for an amendment to its right-of-way lease across California's Sovereign and School Lands, and the BLM would deny North Baja's application to amend its existing Right-of-Way Grant and obtain a Temporary Use Permit for the portion of the Project on Federal lands. The No Project Alternative means that the Project would not go forward and the Project-related facilities would not be installed. Accordingly, none of the

potential impacts on federally and State-listed or other special status species identified for the construction and operation of the proposed Project would occur.

Because the proposed Project is privately funded, it is unknown whether North Baja would fund another energy project in California. However, should the No Project Alternative be selected, the energy needs identified in Section 1.1 would likely be addressed through other means, such as through other LNG or natural gas-related pipeline projects. Such projects may result in potential environmental impacts of the nature and magnitude of the proposed Project as well as impacts particular to their respective configurations and operations; however, these impacts cannot be predicted with any certainty at this time.